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Massachusetts Medical Society

PROCEEDINGS OF THE COUNCIL

Stated Meeting, February 7, 1934

A STATED MEETING of the Council was held in John Ware Hall, Boston Medical Library, Wednesday, February 7, 1934, at 12 o'clock, noon. The President, William H. Robey, Suffolk was in the chair and the following 146 Councilors present, and by invitation Mr. David J. Fitzmaurice, legal adviser to the Civil Works Administration in Massachusetts:

BARNSTABLE
W. D. Kinney

BERKSHIRE
I. S. F. Dodd

BRISTOL NORTH
F. V. Murphy
W. H. Allen

BRISTOL SOUTH
E. F. Cody
P. E. Truesdale

ESSEX NORTH
E. S. Bagnall
J. F. Burnham
H. F. Dearborn
A. P. George
T. R. Healy
E. P. Laskey
F. W. Snow
L. T. Stokes
W. D. Walker

ESSEX SOUTH
R. E. Foss
F. W. Baldwin
N. P. Breed
J. F. Donaldson
E. B. Hallet
J. F. Jordan
G. H. Kirkpatrick
W. G. Phippen
J. W. Trask

FRANKLIN
A. E. Johnson
A. H. Wright
H. G. Stetson

HAMPDEN
J. M. Birnie
G. D. Henderson
E. A. Knowlton
S. A. Mahoney
M. W. Pearson
A. G. Rice
G. L. Schadt
G. L. Steele

MIDDLESEX EAST
E. E. Tyzzer
J. H. Blaisdell
Richard Dutton
E. M. Halligan
R. R. Stratton

MIDDLESEX NORTH
G. A. Leahey

MIDDLESEX SOUTH
A. H. Blake
C. F. Atwood
E. W. Barron
C. F. K. Bean
E. H. Bigelow
G. F. H. Bowers
F. R. Clark
W. H. Crosby
D. F. Cummings
A. W. Dudley
H. H. Flagg
C. M. Hutchinson
Josephine D. Kable
A. A. Levi
J. A. McLean
Edward Mellus
C. E. Mongan
J. P. Nelligan
Dwight O'Hara
W. D. Reid
M. J. Shaughnessey
F. G. Smith
C. H. Staples
H. P. Stevens
W. S. Whittemore

NORFOLK
A. S. Begg
F. J. Bailey
F. G. Balch
H. G. Batchelder
D. N. Blakely
W. L. Burrage
F. S. Cruickshank
D. G. Eldridge
J. E. Fish
Alice M. Gray
J. B. Hall
G. W. Kaan
C. J. Kickham
M. J. Konikow
W. A. Lane
J. S. H. Leard
Charles Malone
F. W. Marlow, Jr
S. F. McKeen
Hyman Morrison
T. J. Murphy
Victor Safford
J. L. Sullivan
H. F. R. Watts

NORFOLK SOUTH
C. S. Adams
W. G. Curtis
G. V. Higgins
F. E. Jones
H. T. Hutchins
E. P. Joslin
G. A. Leland
T. J. O'Brien
F. W. Palfrey
G. P. Reynolds
W. H. Robey
W. R. Sisson
Louisa Paine Tingley
J. R. Torbert
H. P. Towle
F. A. Washburn
Conrad Wesselhoeft

PLYMOUTH
P. H. Leavitt
T. H. McCarthy
G. A. Moore

SUFFOLK
A. E. Austin
J. W. Bartol
G. H. Bigelow
Horace Binney
Gerald Blake
W. B. Breed
W. J. Brickley
C. S. Butler
David Cheever
F. J. Cotton
W. P. Cross
Lincoln Davis
R. L. DeNormandie
Reginald Fitz
Channing Frothingham
H. W. Goodall
John Homans

WORCESTER
W. C. Seelye
J. C. Austin
W. P. Bowers
L. R. Bragg
F. H. Clapp
P. H. Cook
G. E. Emery
E. L. Hunt
E. R. Leib
A. W. Marsh
E. C. Miller
J. W. O'Connor
A. M. Shattuck
F. H. Washburn
R. P. Watkins
S. B. Woodward

WORCESTER NORTH
F. R. Dame
A. F. Lowell
H. R. Nye

The record of the last meeting was read in abstract by the Secretary and as no errors or omissions were noted the record was accepted by vote as read and as printed in the Proceedings.

The President made the following remarks and then read short obituaries of the three Councilors who had died in office since the last meeting:

From time to time we hear questions from Fellows in various parts of the State about the activities of the Officers of our Society. Some idea may be obtained from the reports of our committees concerning the work which is considered and accomplished. The President and his Executive Assistant, Dr. O'Brien, have visited sixteen of the eighteen district societies since last June. We have outlined our plans for Postgraduate Instruction, the Hospitalization Plans, the mechanism of the Federal Emergency Relief and Civil Works Administrations and the intricacies of legislative bills. In addition to the President's visits to the district societies

there have been frequent meetings with several of our committees and sub-committees. The Postgraduate Course may be pronounced an unquestionable success and its efficient committee already plans its second year built from its present experience.

Early in November, at the request of the Federal Emergency Relief Administrator for Massachusetts, your President requested the Presidents of the District Societies to form committees for the purpose of establishing fee tables which could be used by the welfare organizations in each community as a basis for the payment of medical services of physicians to their indigent patients registered with the Welfare Organization of their communities. The physician could not collect unless he too had registered with the Welfare Society and had thus expressed his willingness to accept the terms of the arrangement. This seemed hopeful but hope deferred maketh the heart sick. Weeks have passed without any advantages to the practicing physician in Massachusetts or in any other state that we have heard about except New Hampshire, but there the medical expenses of the indigent sick have been met by a state fund, not by Federal aid. The Federal money allocated to Massachusetts was used to reduce the taxes in cities and towns and, unless the Federal Government sets aside another sum or the State Government comes to our aid in consideration of the help which it has received from Washington, our position remains unchanged. When some of our physicians applied to Welfare organizations they were told that the only money at their disposal was for clothing, food and shelter—none had been received for medical service.

The Civil Works Administration has also received our earnest consideration. In 1916 the U. S. Government passed an act appointing medical boards in several areas throughout the States consisting of three or four physicians for the examination of Federal Employees, such as postal and customs clerks. The Federal Government claimed the privilege of having its employees examined by accredited physicians who would make out their reports in extenso and submit them to the Government. This was done and payment was made based upon a fee table within the following three or four months. When men and women were placed upon civil works projects in the last eight or nine weeks it was still expected that injured employees would be examined and treated by the medical boards appointed under the Act of 1916 and not by their family physicians. The number of injured and sick under this new arrangement was considerable and the loss to their physicians notable. Objection was made by the Committee on Public Relations and telegrams were sent to the President of the United States, senators, representatives and officers of the American Medical Association. Replies were received encouraging us to believe that a change would be made. Subsequently, as the result of a conference with the legal adviser for Massachusetts of the C. W. A., lists of the members of the Massachusetts Medical Society were supplied and he has instructed the local administrators throughout the State to allow these physicians to attend their patients when injured or sick and to submit their reports on prescribed paper to the Federal Government. This has already been done by some of our members but no one has collected a fee so far as we have been able to learn. Perhaps it is too early, but worse still, perhaps there is no money for such purposes. Dr. Olin West, who telephoned to me last week from Washington, said that Dr. Cary, Dr. Woodward and he had been in close touch with the authorities and they felt hopeless about a favorable outcome for physicians from either the Federal Emergency Relief or the Civil Works Administrations.

About two weeks ago Dr. Cary, Chairman of the Legislative Committee of the American Medical Association, telegraphed to me and a little later Dr. Olin West telephoned asking us to support President Roosevelt's economy program regarding benefits to veterans with service connected disabilities but to oppose free medical care and hospitalization to nonservice connected cases unless indigent. They should remain with their local physicians and hospitals regardless of governmental compensation. We wired the acceptance of these facts as outlined by Dr. Cary and asked a number of prominent laymen to telegraph their approval of the economy program and to oppose free medical care to nonservice connected cases. We have known of this step for some time and regard it as another means of reducing the income of the hard-working physician.

Since the last meeting of the Council we have suffered the loss of three of our members.

Dr. Joseph Aloysius Mehan died in Lowell, Massachusetts, October 12, 1933. He was born in Lowell in 1876 the son of the late Owen and Jane (Flynn) Mehan and received his early education in this city and graduated in medicine from the Tufts College Medical School in 1906.

He joined the Massachusetts Medical Society in 1906 and at the time of his death was a member of the Council of which he had been an active and useful member.

Dr. Mehan taught chemistry in the Tufts College Medical School for fifteen years and was a member of the staff of St. John's Hospital where he conducted the roentgenological department.

He is survived by three children and two sisters.

Dr. Edgar Dwight Hill died at his home in Plymouth, Massachusetts, November 4, 1933. He was born in Biddeford, Maine, in 1855 and graduated in medicine from the Bowdoin Medical School in 1877.

Dr. Hill served as Medical Examiner for the Plymouth District for forty-two years, and for several years on the staff of the Jordan Hospital. He joined the Massachusetts Medical Society in 1878 and was a member of the Council at the time of his death. He held memberships in several Masonic orders, the Elks, and the Old Colony Club.

He is survived by his widow, two daughters and a son.

DR. WILLIAM EDWARD DENNING died in Worcester, Massachusetts, December 7, 1933. He was born in Burlington, Vermont, in 1872 and graduated from the University of Vermont Medical School in 1899. He served on the Staff of the Worcester City Hospital and for several years on the out-patient staff of the Memorial Hospital.

He had been president of the Worcester District Medical Society and represented this Society as a member of the Council of the Parent Society.

He is survived by two sisters and three nephews.

The Committee of Arrangements reported through G. P. Reynolds, Chairman. He said that the committee had completed the schedule of meetings in Worcester for the annual meeting. The arrangements for the commercial and scientific exhibits were progressing well and the committee expected to have all of the exhibits that the Hotel Bancroft could accommodate. He hoped that the Fellows of the Society will show much interest in the exhibits and will inspect them with care. Dr. W. C. Seelye, President of the Worcester District Medical Society asked if the local committee of arrangements had been appointed and Dr. Reynolds replied that he was on the point of taking up the matter with the Worcester District, the preliminary work having been attended to by the members of his standing committee. The report was accepted by vote.

T. R. Goethals, Norfolk, presented the report of the Auditing Committee (See Appendix No. 1) and C. S. Butler read the report of the Treasurer. On motion duly seconded each was accepted.

D. N. Blakely, Norfolk read the report of the Committee on Membership and Finance, on Membership and it was accepted.

REPORT OF THE COMMITTEE ON MEMBERSHIP AND FINANCE ON MEMBERSHIP

This Committee recommends:

1. That the following named thirteen Fellows be allowed to retire as of December 31, 1933, under the provisions of Chapter I, Section 5, of the By-Laws:

1. Byrne, Charles Armstrong, Hatfield, with remission of dues, 1933.
2. Fernald, Guy Goodwin, West Concord.
3. Hutchinson, Chessman Palmer, Auburndale.
4. Jackson, Charles William, Monson.
5. Judkins, Frank Louville Mason, Lynn, with remission of dues, 1933.
6. Macdonald, Colin William, Jamaica Plain.
7. McNeish, Alexander, Leicester.
8. Merrill, William Howe, Lawrence.
9. Morse, Fred Harris, Brookline, with remission of dues, 1932, 1933.
10. Parks, Silas Henry, Great Barrington.
11. Purinton, Herbert Harmon, Somersworth, N. H., with remission of dues, 1931, 1932, 1933.
12. Schorer, Cornelia Bernhardine Johanna, Lübeck, Germany.
13. Viles, Clarence Albertus, Lowell.

2. That dues of the following named six Fellows be remitted under the provisions of Chapter I, Section 6, of the By-Laws:

1. Borden, Charles Richardson Cobb, Brookline, 1933, 1934.
2. Drake, Arthur Knowlton, Avon, Ill., 1934.
3. Dunscombe, William Colby, Ensenada, Porto Rico, 1934.
4. Hamilton, Robert DeLancey, Newburyport, 1934.
5. McNeil, Donald, Sacramento, Calif., 1932, 1933.
6. Wilder, Edward Wheeler, Madura, So. India, 1934.

3. That the following named fifteen Fellows be allowed to resign, as of December 31, 1933, under the provisions of Chapter I, Section 7, of the By-Laws:

1. Carr, George Byron, Lynn.
2. Coolidge, Thomas Buckingham, Muscongus, Maine.
3. Fong, Theodore Claremont Chen, Washington, D. C.
4. Graves, Robert John, Concord, N. H.
5. Kelley, Julius Goddard, Providence, R. I.
6. Kendrick, Doris, Lexington, with remission of dues, 1933.
7. Lalor, Thomas Joseph, Woonsocket, R. I.
8. Ledoux, Alfred Campbell, Chicago, Ill.
9. MacLeod, Dorothy Green, Clinton, with remission of dues, 1932, 1933.
10. Mitchell, Harold Hubbard, Freeport, L. I., N. Y.
11. Pfeiffer, Albert, Albany, N. Y.
12. Teagarden, Elmer Jay, Rochester, N. Y., with remission of dues, 1933.
13. Weinberg, Philip Baron, Whitefield, N. H., with remission of dues, 1931, 1932, 1933.
14. Williams, Hubert Joseph, Boston, with remission of dues, 1933.
15. Windsberg, Eske Harry, Providence, R. I.

4. That the following named twenty-two Fellows be deprived of the privileges of Fellowship under the provisions of Chapter I, Section 8, Clause (a) and (b) of the By-Laws:

1. Bloomberg, Maxwell Harold, Everett.
2. Boruchoff, Henry, Malden.
3. Bowen, James Francis, Albany, N. Y.
4. Butler, Harry Herbert, Brookline.
5. Crimmin, Leo Philip, Brockton.
6. DeArmit, Lillian, Schenectady, N. Y.
7. Donovan, Timothy Stephen, New York, N. Y.
8. Farnham, Evalyn Marynia Foot Lawther, New York, N. Y.
9. Hall, Walter Davis, Rockland, Maine.
10. Kaufman, Aaron, Brookline.
11. Kelleher, Simon Bartholomew, Cambridge.
12. Kirkland, Charles Aimé, Montreal.
13. Lemaitre, George Lanouette, Jr., Methuen.
14. O'Dea, Patrick Joseph, Fitchburg.
15. Oeser, Paul Richard, Lawrence.
16. Perkins, Stephen Irving, address unknown, formerly Bartlett, N. H.
17. Queen, Hyman Samuel, Worcester.
18. Stone, Jane Gray, Lakeville, Conn.
19. Tierney, John Paul, Brookline.
20. Towle, Clarence Clarke, Ojai, California.

21. Williams, Carl Alonzo, St. Petersburg, Fla.
22. Long, Rufus Wilfred, Lowell.

5. That the following named eight Fellows be allowed to change their membership from one District Society to another without change of legal residence, under the provisions of Chapter III, Section 3, of the By-Laws:

One from Middlesex East to Suffolk

1. Davis, William Lincoln, Winchester.

Two from Middlesex South to Suffolk

1. Ulrich, Helmuth, West Newton.
2. Woodbridge, Philip Dudley, Waban.

Four from Norfolk to Suffolk

1. Derow, Harry Aaron, Brookline.
2. Heffron, Roderick, Brookline.
3. Powers, Edward Parnell, Boston.
4. Reynolds, George Phillips, Brookline.

One from Suffolk to Middlesex South

*1. Wiggin, Sidney Cushing, Newton.

*Transferred from Middlesex South to Suffolk February 3, 1932.

DAVID N. BLAKELY, *Chairman.*

He read the report of his committee on finance, the Budget for 1934, copies being distributed to the Councilors. (See Appendix No. 2.) It was accepted and its recommendations adopted by vote.

Frank R. Ober, Chairman of the Committee on Postgraduate Medical Instruction, read a report of progress. (See Appendix No. 3.)

The Secretary read the reports of the committees appointed to consider the petitions of O. A. Burton and F. E. Draper and both were accepted under the customary rules in such cases.

J. M. Birnie, Hampden said he moved that the report of the committee to consider the petition of Charles L. Furcolo of Springfield to be restored to the privileges of fellowship, that was laid on the table, June 6, 1933, be taken from the table, and it was so voted. He said that the gentlemen who objected to the restoration of Dr. Furcolo had changed their minds and he moved that the recommendation of the committee of which he was chairman that Dr. Furcolo be restored under the usual conditions, be accepted. One of the previous objectors took the floor and explained a change in the mental attitude of the petitioner. Dr. Birnie's motion having been duly seconded was passed without dissent.

The Secretary read the following three petitions, the President nominated the committees to consider them and the Council appointed:

For E. J. Grainger

G. L. Gately, Robert Bonney, E. D. Hartnett.

For F. S. Bennett

L. T. McCready, D. D. Scannell, J. P. Treanor, Jr.

For W. B. Riley

J. F. Burnham, G. E. Kurth, T. V. Uniac.

T. J. O'Brien read a report of progress of the Committee on State and National Legislation. (See Appendix No. 4.) No action.

W. A. Lane, Norfolk presented an informal report of progress for the Committee on Public Relations ending as follows: "The Committee recommends that it be authorized by the Council to represent the Society's interests in dealing with Federal Emergency Relief Administration and other such economic measures as may from time to time arise. We further recommend that a committee be established by each District Medical Society to act as liaison with local F. E. R. A. and C. W. A. officials, etc., and through the Committee on Public Relations of the State Society with the State Administration. This will establish machinery in Massachusetts in accordance with Federal recommendations in Bulletin 7 F. E. R. A. and as is well exemplified by the New Jersey State and local societies (reported in the *A. M. A. Bulletin* for October and *Medical Economics* for November). Free exchange between local and state committees of information on policies and actions is highly desirable." Before voting on Dr. Lane's motion that his report be accepted and placed on file the Council listened to Mr. David J. Fitzmaurice, who represented the legal adviser's office of the Civil Works Administration in Massachusetts. He spoke as follows:

MR. FITZMAURICE: *Mr. President and Members of the Council*—As you possibly all know, Dr. O'Brien got in touch with Attorney John H. Morris, who is the legal counsel for the Civil Works Administration Board of Massachusetts in regard to the doctors, and immediately, at the instance of the Massachusetts Medical Society, a list of the members of the Society was sent to every local Civil Works Administrator and County Administrator in Massachusetts. This was followed with a bulletin of ours which recommended the use of the doctors on the list.

Under the original set-up from Washington before we even took charge of the program here they had already in Massachusetts about 4,000 designated Federal doctors. Those doctors normally take care of the Post Office employees, Internal Revenue men, and such other Federal men as get injured in the course of their duties. Those doctors are under the direct jurisdiction of the United States Compensation Commission. And as the thing went along it was soon noticed that some of the doctors whose names were on this list sent out from Washington were dead, others were not in a position to render the services as they were needed, and so a conference was held in Washington with some of the leading medical societies, and as a result, Dr. O'Brien got in touch with Attorney John H. Morris for the Commonwealth of Massachusetts, and a new list has been sent out. Subsequently, I think matters have adjusted themselves pretty much to the satisfaction of everybody, because it happens in my particular function in the legal department to answer all correspondence regarding complaints, and I talk with anywhere from

fifty to one hundred of the local Civil Works Administrators during the course of the day, and they have become pretty familiar now with the manner in which this matter should be handled. They have been told that the new lists we sent them contain the names of approved doctors —doctors that belong to the Massachusetts Medical Society, and they are the doctors that they are starting to use now; in fact, some of them have been used already.

Now I thought while I was here I would go into a little detail about the forms that are used. When any Civil Works Administration employee presents himself for your treatment he should have two copies of what we call Form C A 16. This Form C A 16 is nothing more or less than a request for treatment of an injured employee. That merely identifies him as an employee and gives you the authorization to treat him, so you know that for that treatment the United States Government pays you.

On the back of that form there is a report to be filled out, which is just a little stereotyped report about the condition of the injuries, and so forth and so on. One copy of that C A 16 goes back to the local Civil Works Administrator, to the injury clerk. I might add at this time that injury clerks have been appointed in every city and town. At the start of this program most of the local Civil Works Administrators were the chairmen of the Boards of Public Welfare. Well, between getting projects planned out and getting work started and one thousand and one other things, they were rushed to death, and it was rather remarkable the way the thing was set up. When the program started, President Roosevelt called all the governors and mayors from the various States to Washington, and he said, "Put the men to work." It was not a question of getting the administration set up then; but right now we are setting up the administrative end of it because it was necessary to get the men to work first, and that is mainly the reason why some of the work has not gone along in the manner in which it should.

The doctor fills out one of these forms and sends it along to the injury clerk. His instructions are to coöperate with every doctor and see that the doctors get these reports in, so that your bills will get into Washington and will be paid promptly. I know that a large number of doctors have already received their money from Washington; so it is not a question of waiting six months or longer for the red tape in Washington. They have cut the red tape down to the minimum on these doctors' bills, and if you will get your bills in promptly they will be paid promptly.

In addition to that there are various other forms that have to be filled out. Form S 69, which is this one, is called "Public Vouchers for Hospitals, Doctors, and Medical Fees." It is nothing more or less than a regular bill, and on that the doctor lists each individual visit that the patient makes to him, lists his charges, and that is returned to the local Civil Works Administrator, and then the Administrator signs it for proof of payment. That comes in to us, and when all the vouchers are in proper order we immediately forward them to the United States Compensation Commission in Washington for payment.

If it so happens that your bills are being held up it may possibly be that the reason is due to the fact that the injury clerk or somebody else has not sent the forms in properly. I received just before I left a letter from the local board in Grafton, Massachusetts, with regard to some doctor there who neglected to sign some of these forms. This man performed a very serious operation, and why the doctor did not sign his form immediately I do not know; but I immediately dispatched a wire to the local board and told them to have the doctor sign the form because there was nothing we could do until the forms were signed.

So that you can see at times it is just a question of coöperation of one with another. I know that a lot of doctors have sent in bills. This following charge may be amusing but still I suppose time to a doctor is valuable—"For filling out forms, 50 cents." I suppose I can hardly blame you gentlemen; however, it is nothing that we in Boston can do anything about. The rules and regulations of the United States Employees' Compensation Commission exist, and they have to be carried out. Before you get through with a case you will have signed anywhere from five to six or seven and possibly eight or nine forms. However, I would not let that discourage you. But the legal department is doing everything possible, and we are coöperating with the injury clerks, who are willing to coöperate with you in every possible way to help you. Thank you. (Applause.)

In response to a question from the floor F. A. Washburn, Suffolk, said that he was on a committee of the American Hospital Association in Washington that conferred with the authorities there, and the ruling is that the patient of the C. W. A. becomes a semi-private patient when he enters a hospital; the doctor collects his fee and the hospital collects its bill. On motion by E. S. Bagnall, Essex North an amendment was offered to the motion of Dr. Lane that the recommendation of the Committee on Public Relations be adopted by the Council. The amendment was accepted and the motion prevailed. On motion by T. J. O'Brien a vote of thanks to Mr. Fitzmaurice was passed by the Council.

The President nominated and the Council appointed T. J. O'Brien a delegate to the annual Congress on Medical Education, Licensure and Hospitals of the American Medical Association at Chicago, February 12 and 13, 1934. In the same way were appointed delegates to the House

of Delegates of the American Medical Association for the sessions of 1933 and 1934:

J. M. Birnie; Alternate, W. C. Leary.
C. E. Mongan; Alternate, L. S. McKittrick.
J. F. Burnham; Alternate, E. L. Hunt,

also delegates to the annual meetings of the five New England State Medical Societies, as follows:

Maine: F. W. Snow, R. V. Baketel.
New Hampshire: J. G. Hanson, A. R. Cunningham.
Vermont: I. S. F. Dodd, R. J. Carpenter.
Connecticut: E. A. Knowlton, R. B. Butler.
Rhode Island: W. A. Nield, S. V. Merritt.

David Cheever offered the report of the Committee on the Revision of the By-Laws, of which he was chairman. (See Appendix No. 5.) A pamphlet containing a draft of the revision and the report of the committee had been sent to each Councilor a week before the meeting. He said he had received only the day before slight modifications of the wording of Chapter IV, Section 4 and Chapter VI, Section 4. He moved that these two amendments be a part of the revised By-Laws and that the By-Laws, thus amended be approved by the Council. In the discussion which followed seven Councilors offered suggestions in amendment of the draft as printed. Dr. Cheever's motion having been seconded was put to a vote and the motion was lost. On motion by S. B. Woodward, Worcester, duly seconded it was voted that the Revised By-Laws be referred back to the committee on revision with the understanding that those who have amendments to offer send them in writing to the chairman of the committee at once so that a new revision may be sent to all Fellows of the Society with the annual program in accordance with the terms of Chapter IX of the By-Laws, and that the matter of approval be taken up at the next meeting of the Council.

J. F. Burnham, Essex North, offered the following motion and it was duly seconded and prevailed:

Moved: That the Council of the Massachusetts Medical Society recommends the adoption of the official American Medical Association auto emblem by the Fellows of this Society in order to facilitate traffic and parking advantages needed by physicians.

Adjourned at 1.45 o'clock, p. m.

WALTER L. BURRAGE, *Secretary.*

APPENDIX TO THE PROCEEDINGS OF THE COUNCIL

APPENDIX NO. 1

AUDITING COMMITTEE'S REPORT

To the Council of the Massachusetts Medical Society:

The Auditing Committee has received from Hartshorn and Walter the audit of the books of the Treasurer herewith submitted. It has examined the securities in the hands of the Treasurer as of Jan. 8, 1934, and found all to be present as shown in this account.

THOMAS R. GOETHALS,
JOHN W. CUMMIN.

February 2, 1934.

Hartshorn and Walter
Certified Public Accountants
50 Congress Street
Boston

January 31, 1934.

The Auditing Committee:
Dr. T. R. Goethals and Dr. John W. Cummin
The Massachusetts Medical Society
Boston, Massachusetts.

Gentlemen:

At the request of your Treasurer, Dr. Charles S. Butler, we have audited the books and accounts of The Massachusetts Medical Society for the twelve months ended December 30, 1933 and submit herewith:

Schedule A Statement showing the Assets and Liabilities of The Massachusetts Medical Society December 30, 1923
Schedule B Statement showing the Current Account of The Massachusetts Medical Society for the twelve months ended December 30, 1933

The cash on deposit in the banks has been reconciled with the bank statement and found correct.

All known cash receipts have been properly accounted for and disbursements are supported by vouchers or cancelled checks.

We have made no examination of the securities, but are informed by Dr. Butler that you have personally examined these securities, also the savings bank books, and found them intact.

The attached statements showing the financial condition of the Society on December 30, 1933 and the Current Account for the twelve months ended December 30, 1933 are true, to the best of our knowledge and belief.

Respectfully submitted,
HARTSHORN AND WALTER.

TREASURER'S REPORT

Showing the Assets and Liabilities of the Massachusetts Medical Society December 30, 1933

SCHEDULE A

Assets

Cash:		
Merchants National Bank.....	$1,715.82	
New England Trust Co.	1,158.47	
		$2,874.29
Investments.....Exhibit 1		152,845.42
New England Journal of Medicine..		1.00
Total		$155,720.71

Liabilities

Endowment Funds:		
Shattuck Fund:		
O. C. Shattuck 1854-1866.....	$9,166.87	
Phillips Fund:		
Jonathan Phillips 1860.....	10,000.00	
Cotting Fund:		
B. E. Cotting $1,000—1876-1881-1887	3,000.00	
		$22,166.87
Building Fund: Exhibit 2		
Principal	$49,350.75	
Income Uninvested.....	1,439.06	
		50,789.81
Balance		$72,956.68

Postgraduate Course—		
Unexpended Income		2,749.77
General Fund:		
Balance, January 1, 1933	$74,428.48	
Add,—Increase for the year ended December 30, 1933—Schedule B	5,585.78	
Balance, December 30, 1933		80,014.26
Total		$155,720.71

INVESTMENTS

December 30, 1933

SCHEDULE A EXHIBIT 1

	Investment	Income
Endowment Funds:		
Shattuck Fund:		
Annuity Policy — Massachusetts Hospital Life Insurance Co.	$9,166.87	$343.75
Phillips Fund:		
$10,000 Commonwealth of Massachusetts reg. 3½s Jan. 1, 1944	10,000.00	350.00
Cotting Fund:		
Deposit—Institution for Savings, Roxbury	1,000.00	30.00
Deposit — Provident Institution for Savings	1,000.00	32.50
Deposit—Suffolk Savings Bank—Boston	1,000.00	30.00
Totals	$22,166.87	$786.25
Building Fund:		
Cash—New England Trust Co.	$1,439.06	
Deposit — Framingham National Bank, Savings Dept.	316.14	$7.75
Deposit—Franklin Savings Bank	1,359.72	44.27
$5,000 Canadian National Ry. 5s Oct. 1, 1869	4,950.00	250.00
5,000 Conveyancers Title Ins. & Mortgage Co. 4½s Parti-Mortgage, Oct. 31, 1939 (In default)	5,000.00	
5,000 Chicago R. I. & Pacific Ry. 1st & ref. 4s April 1, 1934 (In default)	4,735.00	100.00
1,000 Cincinnati Union Terminal, 1st Mtge. Series C 5s May 1957 (Guaranteed)	1,000.00	35.42
2,000 Commonwealth of Massachusetts reg. 3½s July 1, 1935	1,907.60	70.00
1,000 Commonwealth of Massachusetts reg. 3½s Jan. 1, 1936	1,002.50	35.00
1,000 Edison Electric Illuminating Co. of Boston 5s Apr. 15, 1936	990.00	23.47
1,500 N. Y., Chicago & St. Louis R. 6s Notes Oct. 1, 1935	1,500.00	90.00
2,000 Northern Ohio Traction & Light Co. Gen'l & Ref. Series A 6s Mar. 1, 1947	1,886.50	120.00
Boston Medical Library Note 4½% due April 1, 1935	24,703.29	1,111.64
Totals	$50,789.81	$1,887.55
General Fund:		
Deposit—Franklin Savings Bank	$1,074.48	$61.76
$1,000 American Tel. & Tel. Co. Deb. 5½s Nov. 1943	985.00	55.00
3,000 Appalachian Electric Power Co. 1st & Ref. 5s May 1, 1956	2,910.00	150.00
2,000 Attleboro, Mass. 3½s Mar. 1, 1935	1,978.00	70.00
1,000 Boston & Albany R. R. 4s May 1, 1935	995.00	40.00
3,000 Cedars Rapids Mfg. & Power Co. 1st 5s Jan. 1, 1953	2,805.00	150.00
3,000 Central Power & Light Co. 1st 5s Aug. 1, 1956	2,730.00	150.00
1,000 Chicago, Burlington & Quincy R. R. 1st & Ref. 5s A Feb. 1, 1971	970.00	50.00
1,000 City of Milwaukee 4½s Jan. 1, 1934	998.75	45.00
1,000 Commonwealth Edison 1st. Mtge. 5½s June 1, 1962	927.50	55.00
3,000 Commonwealth of Australia 5s July 15, 1955	2,985.00	150.00
4,000 Commonwealth of Massachusetts reg. 3½s Jan. 1, 1935	4,000.00	140.00
1,000 Commonwealth of Massachusetts reg. 3½s July 1, 1935	953.80	35.00
3,000 Commonwealth of Massachusetts reg. 3½s July 1, 1938	3,015.00	105.00
1,000 Commonwealth of Massachusetts reg. 3½s Jan. 1, 1941	1,000.00	35.00
2,000 Commonwealth of Massachusetts reg. 3½s Nov. 1, 1935	2,025.96	19.55
2,000 Conveyancers Title Insurance & Mortgage Co. 4½s Dec. 1, 1937 (In default)	2,000.00	
1,000 Connecticut River Power Co. 1st Mtge. 5s Oct. 1, 1952	940.00	50.00
3,000 Dayton Power & Light 1st Ref. 5s June 1, 1941	2,797.50	150.00
1,000 Edison Electric Illuminating Co. of Boston 5s Apr. 15, 1936	990.00	23.47
Fitchburg, Mass. Tax Antic. Notes, Apr. 21, 1933		56.34
2,000 Great Northern Ry. Co. Gen'l B 5½s Jan. 1, 1952	1,932.50	110.00
1,000 Georgia Power Co. 1st & Ref. 5s Mar. 1, 1967	862.50	50.00
3,000 Guarantee Title & Trust Corp. 5½s Oct. 1, 1936	3,000.00	82.50
3,000 International Paper Co. Ref. Series A 6s Mar. 1, 1955	3,076.00	180.00
2,000 Metropolitan Ice Co. 1st Mtge. 7s Jan. 1, 1954	2,100.00	140.00
1,000 Narragansett Electric Co. 1st Mtge. Series A 5s Jan. 1, 1957	960.00	50.00
1,000 Narragansett Electric Co. 1st Mtge. 5s June 1958 Series C	982.50	19.58
750 N. Y., Chicago & St. Louis R. R. 6% Notes Oct. 1, 1935	750.00	45.00
1,000 Peoples Gas Light & Coke Co. 1st & Ref. 6s June 1, 1957	967.50	60.00
4,000 Public Service Co. of No. Ill. 1st & Ref. 5s Oct. 1, 1956	3,640.00	200.00
1,000 Rockland Light & Power Co. 1st Ref. A 4½s May 1958	935.00	45.00
1,000 So. Pacific (Ore. Lines) 1st Mtge. A 4½s Mar. 1, 1977	875.00	45.00
1,000 So. Pacific (Ore. Lines) 1st Mtge. A 4½s Mar. 1, 1977	730.00	45.00
4,000 Springfield, Mass. 4s Jan. 1, 1934	4,024.00	39.56
Toledo Edison Co. 1st Mtge. Gold 5s Mar. 1, 1947		75.00
3,000 U. S. Cold Storage Co. 1st Mtge. 6s Jan. 1945	3,000.00	180.00
U. S. Liberty 4¼s Oct. 15, 1933-38		128.56
2,200 U. S. Liberty 4¼s Oct. 15, 1943-45	2,200.00	93.50
1,000 U. S. Liberty 4¼s June 15, 1932-47	990.00	42.50
U. S. Treasury 4s Aug. 15, 1933		33.54
2,000 U. S. Treasury 2⅞s June 15, 1938	2,000.00	28.74
2,000 U. S. Treasury 3¼s Aug. 1, 1941	2,000.00	
1,000 U. S. Treasury 4¼s-3¼s Oct. 15, 1943-45	1,015.00	
2,000 U. S. Treasury 4¼s-3¼s Oct. 15, 1943-45	2,026.25	3.78*
2,000 U. S Rubber Co. 1st & Ref. 5s Jan. 1, 1947	1,735.50	100.00
3,000 Wilson Co., Inc. 1st 6s April 1, 1941	3,006.00	180.00
Worcester, Mass. 4½s July 1, 1933		7.87
Totals	$79,888.74	$3,568.69

*Interest Paid Out.

Summary

Endowment Funds	$22,166.87	$786.25
Building Fund	50,789.81	
General Fund	79,888.74	3,568.69
Totals	$152,845.42	$4,354.94

Note: The Building Fund Income has been transferred to Building Fund Principal.

BUILDING FUND

December 30, 1933

SCHEDULE A EXHIBIT 2

Balance, January 1, 1933	$48,665.12
Add,—James S. Stone Memorial	237.14
Income from Securities — Schedule A Exhibit 1	1,887.55
Balance, December 30, 1933	$50,789.81

STATEMENT

Showing the Current Account of The Massachusetts Medical Society for the Twelve Months Ended December 30, 1933

SCHEDULE B

Revenue

Assessments Received by District Treasurers:		
Barnstable	$390.00	
Berkshire	1,010.00	
Bristol North	618.00	
Bristol South	1,810.00	
Essex North	1,690.00	
Essex South	2,208.00	
Franklin	330.00	
Hampden	2,500.00	
Hampshire	550.00	
Middlesex East	893.00	
Middlesex North	1,110.00	
Middlesex South	7,110.00	
Norfolk	6,072.00	
Norfolk South	1,000.00	
Plymouth	1,190.00	
Suffolk	7,112.00	
Worcester	3,580.00	
Worcester North	860.00	$40,033.00
Assessments Received by Treasurer		1,213.00
Non-Resident Assessments		1,350.00
Sale of Directories and "History"		81.55
Income from Funds — Schedule A Exhibit 1		4,354.94
Interest on Bank Deposits		28.17
Profit on Sales of Securities		615.02
Donation—Rudnick Charitable Foundation		10.00
Total		$47,685.68

Expenses

Salaries:			
Secretary	$3,000.00		
Treasurer	500.00		
Assistant to President	2,500.00	$6,000.00	
Expenses of Officers and Delegates:			
President	374.09		
Secretary	743.54		
Treasurer	300.25		
District Treasurers	2,280.50		
Censors	757.08		
Delegates to A. M. A.	629.89		
Delegates to New England Medical Council	53.08		
Delegate to Congress on Medical Education, Medical Licensure and Hospitals	102.28	5,240.71	
General Expenses:			
Maintenance of Society Headquarters (Including Clerical and Other Expenses)	3,288.31		
Shattuck Lecture	200.00		
Cotting Luncheons	252.15		
Miscellaneous Expenses	31.25		
Committee Expenses:			
State and National Legislation	$49.42		
Public Health	78.56		
Medical Education and Diplomas	25.00		
Membership and Finance	16.30		
Ethics and Discipline	3.20		
Public Relations	286.31	458.79	4,230.50
Total			$15,471.21 $47,685.68
Dividends to District Societies.			5,000.00

Standing Committees:			
Publications:			
A. New England Journal of Medicine	$17,000.00		
B. Annual Directory	1,637.74	18,637.74	
Malpractice Defense		1,092.38	
Committee on Post Graduate Instruction		1,000.00	
Committee of Arrangements — Annual Meeting		898.57	21,628.69
Total Expenses			$42,099.90
Surplus			$5,585.78

TREASURER'S REPORT

Mr. President and the Council:

The year, 1933, covering financial affairs within our country, has been a period, probably the most demoralized and unprecedented in the clear memory of any of us; a period, too, which has caused your Treasurer much anxiety. He wishes, therefore, to put in this record, that our Society has passed through an epidemic of bank failures; has experienced a complete breakdown of the banking system of our country, and has seen the U. S. Government repudiate its promises to pay in gold, as written in its bonds and printed on its money. The Society has felt the effects of these catastrophes. Our Fellows, individually, have, also. Yet the Society has been remarkably fortunate in meeting such conditions. The favorable results in *our* finances the past year, the Treasurer believes, are a striking example of loyalty of Fellows, as well as an expression of their appreciation of the Society's mutually helpful activities.

The total revenues, in 1933, from annual dues, resident and non-resident, amount to $42,596, only $212 less than in 1932. Other income of $4355, from invested funds, bank interest of $28, profit of $615, and proceeds of sales of $81, amount in addition to $5079, an increase over 1932, from these sources, of $294. Total dues and other income, as just recorded, amount to $47,675.

During 1933 the Society, through the Committee on Postgraduate Medical Instruction, began the postgraduate courses. In consequence, the Treasurer has received, to December 30, further special revenues of $3013. This sum, he has segregated as a "special object fund." Including the appropriation by the Society in 1933, of $1000, which has been used toward expenses, the balance available for further expenses of the postgraduate courses at the beginning of 1934 is $2750.

The separate "Building Fund" early in the year received the "James S. Stone Memorial Fund" and, during the year, from investments, other income of $1887. Two of the securities of this Fund have defaulted their interest payments. These securities, consequently, show large shrinkages in values. At present the book value of the fund is $50,789 and market value, about $44,180 (a depreciation of 13% only).

Regarding expenses of the Society, the Treasurer would again urge more careful supervision of committee expenses. He believes that further economies are possible, without impairing efficiency or lessening good results to the Society. Combined expenses of all committees and departments (except that of the *Journal*) show a reduction in 1933 of about

$1237. But this sum is offset by increased appropriation necessary for the *Journal*, during a year of depression in advertising income.

You have before you, in tabulated form, a comparison of the results for 1932 and 1933; as well as a statement of several items for the past five years and for 1908, twenty-five years ago. These show, in an impressive way, the financial growth of our Society.

The Society ends 1933 with unexpended revenues of $5585. The total assets December 30, 1933, amount to $155,720 showing an increase over 1932 of $10,000. During the past month, since December 1933, market values of almost all our bonds show good advances over 1932 prices, so that the depreciation in securities held in the "General Fund" is much less than the 15% reported one year ago; in fact, is now only 10%.

Your Treasurer takes this opportunity to thank the officers of the Society, the officers of District Societies, and especially the working staff of the *New England Journal of Medicine* for their helpfulness during the past difficult year.

The Treasurer will be glad to answer questions.

CHARLES S. BUTLER, *Treasurer.*

THE MASSACHUSETTS MEDICAL SOCIETY

Treasurer's Report for the Calendar Year 1933, in Comparison with That of 1932

DISBURSEMENTS

	1932	1933
Salaries		
Secretary	$2,875.00	$3,000.00
Treasurer	500.00	500.00
Assistant to President	2,500.00	2,500.00
Expenses of Officers and Delegates		
President and Vice-President	8.36	*374.09
Secretary	808.63	743.54
Treasurer	230.24	300.25
District Treasurers	2,272.11	2,280.50
Censors	744.08	757.08
Delegates to House of Delegates A. M. A.	1,030.92	732.17
Delegates to New England Medical Council	187.95	53.08
General Expenses		
Maintenance Society Headquarters	3,380.99	3,288.31
Shattuck Lecture	200.00	200.00
Cotting Luncheons	231.79	252.15
Expenses of Committees		
Of Arrangements for Annual Meeting	1,250.66	898.57
Publications:		
A. New England Journal of Medicine	15,500.00	17,000.00
B. Annual Directory	1,935.40	1,637.74
Membership and Finance	9.75	16.30
Ethics and Discipline	48.00	3.20
Medical Education and Medical Diplomas	10.00	25.00
State and National Legislation	612.19	49.42
Public Health	9.73	78.56
Malpractice Defense	939.76	1,092.38
Section of Obstetrics and Gynecology	102.35	0.00
Public Relations	186.99	286.31
Postgraduate Medical Instruction	0.00	1,000.00
Special Appropriations		
Contribution to Better Business Bureau	0.00	25.00
Miscellaneous Expenses	217.75	6.25
To District Societies	5,000.00	5,000.00
Total Disbursements	$40,792.65	$42,099.90
Unexpended Balance	6,810.87	5,585.78
	$47,603.52	$47,685.68

*This item includes a considerable amount for expenses incurred in 1932 but not paid until 1933.

REVENUES

	1932	1933
Assessments		
Paid to District Treasurers	$40,766.00	$40,033.00
Paid to Treasurer	543.40	1,213.00
From Non-Resident Fellows	1,498.26	1,350.00
From Sales	71.91	81.55
Shattuck Fund	389.59	343.75
Phillips Fund	350.00	350.00
Cotting Fund	115.00	92.50
General Fund	3,500.35	3,568.69
Interest on bank balance	81.06	28.17
Gift	10.00	10.00
Profit and Loss	277.95	615.02
Total Income	$47,603.52	$47,685.68

FOR COMPARISON

	Building Fund	General Fund	Total Assets	Revenues	Expenses
1928		$88,383	$88,383	$38,686	$37,954
1929	$19,195	87,232	106,427	37,359	38,657
1930	20,187	86,348	106,535	40,861	41,695
1931	46,507	89,784	136,291	47,355	43,969
1932	48,665	96,595	145,260	47,603	40,792
	Totals			$211,864	$203,067
			Assets	Revenues	Expenses
1908			$40,494	$16,601	$16,399

APPENDIX NO. 2.

REPORT OF COMMITTEE ON MEMBERSHIP AND FINANCE, ON FINANCE, BUDGET FOR 1934

The following Appropriations are recommended

			Appropriated in 1933	
Salaries:				
Secretary	$3,000		$3,000	
Treasurer	500		500	
Assistant to President	2,500	$6,000	2,500	$6,000
Expenses of Officers and Delegates:				
President and Vice-President	500		500	
Secretary	925		800	
Treasurer	350		400	
District Treasurers	2,400		2,400	
Censors	800		800	
Delegates to House of Delegates, American Medical Association	700		900	
Delegates to New England Medical Council	00	5,675	200	6,000
Maintenance Society Headquarters, including clerical and other expenses		3,500		3,400
Shattuck Lecture		200		200
Cotting Luncheons		300		300
Standing Committees:				
Arrangements for Annual Meeting	1,000		1,200	
Publications:				
A. New England Journal of Medicine	18,500		17,000	
B. Annual Directory of Fellows	1,700		1,700	
Membership and Finance	25		25	
Ethics and Discipline	50		50	
*Medical Education and Medical Diplomas	300		300	
*State and National Legislation	300		600	
Public Health	100		100	
Malpractice Defense	1,500	23,975	2,500	23,475

*Including expenses of delegate to annual Congress at Chicago.

Special Committees:			
Postgraduate Instruction	1,000		1,000
Public Relations	400		200
Revision of By-Laws, including printing of new edition	600		
Boston Better Business Bureau	25	2,025	1,200
Returns to District Societies		5,000	5,000
Contingent Fund		00	28
Total		$46,675	$45,603
Estimated Income		$46,675	$45,603

DAVID N. BLAKELY, *Chairman.*

APPENDIX NO. 3

REPORT OF THE COMMITTEE ON POSTGRADUATE MEDICAL INSTRUCTION

Mr. President and Members of the Council:

Since the last Council Meeting the extension program of postgraduate instruction has been inaugurated throughout the State. The first course was begun in Plymouth District on October 9, 1933. Since that time all of the other districts have begun and are now carrying forward the program as selected in each district. The numbers registered in each district are listed below; the towns indicate where the courses are given.

Barnstable		*Hampshire*	
Hyannis	31	Northampton	40
Berkshire		*Middlesex East*	
Pittsfield	74	Melrose	32
Bristol North		*Middlesex North*	
Attleboro	19	Lowell	59
Taunton	25	*Middlesex South*	
Total	44	Cambridge	81
Bristol South		*Norfolk*	
Fall River	23	Boston City Hospital	30
New Bedford	51	Faulkner Hospital	10
		Norwood Hospital	39
Total	74	Total	79
Essex North		*Norfolk South*	
Haverhill	64	Quincy	29
Essex South		*Plymouth*	
Salem	62	Brockton	53
Franklin		*Worcester*	
Greenfield	29	Worcester	110
Hampden		*Worcester North*	
Springfield	60	Fitchburg	21
Holyoke	40	Ayer	20
Total	100	Total	41

Total Number Enrolled—1002

The faculty of instructors numbers 174 doctors. We wish to express the gratitude of the Committee and feel sure that the entire fellowship of the Society appreciates the unselfish devotion of the corps of instructors. We know that on a number of occasions this work has been carried on at a personal sacrifice to the teachers.

The Executive Committee have met each month and have kept in close contact with all developments in connection with the presentation of the program of postgraduate instruction. Careful records have been kept of all criticism and the Committee are considering plans for a continuation of the program for another year.

Respectfully submitted,

FRANK R. OBER, *Chairman.*
LEROY E. PARKINS, *Secretary.*

APPENDIX NO. 4

REPORT OF THE COMMITTEE ON STATE AND NATIONAL LEGISLATION

Mr. President and Members of the Council:

A great many bills have been introduced for the consideration of the present session of the Legislature. A large number were designed to alter the present laws concerning the practice of medicine and the care of the public health.

Several bills proposed methods of inspecting foods, and supervising the health of persons engaged in handling food for public consumption.

Attention was called to the fact that, under the existing law, the physicians and hospitals rendering aid to those persons injured in automobile accidents were often unpaid, while the patients received awards from insurance companies for such medical care and service. A comparable bill asked that the Department of Industrial Accidents be authorized to order insurers to pay physicians and hospitals such fees and charges as are determined by said department.

Bills were filed to regulate the dispensing of medicines; to require the preservation of organs removed at a surgical operation; to require the vaccination of children in private schools that they might receive the same protection as those attending public schools; to require applicants for registration in medicine to come from schools approved by the Board; to amend the laws relating to the practice of dentistry and also of optometry; to restrict the administering of anaesthetics to registered physicians and dentists; to appoint a legislative committee to investigate the activities of the Board of Registration in Medicine; to amend the law relative to registration of physicians and surgeons; to establish a board of examination and registration to regulate the practice of magnetic healers; and to provide for the licensing of chiropractors by the Board of Registration in Medicine assisted by two chiropractors, and to regulate the practice of chiropractic. Many other bills of lesser importance were studied and, when deemed necessary, were opposed or favored at the hearings.

Much interest has been shown by the members of the profession, and local legislative committees are very active in the work of interesting the public and the Legislators in matters concerning the public welfare.

Members of your committee have addressed almost every district society as well as many staff groups and medical organizations of different types throughout the State.

Much interest has been shown in the material problems of our profession, especially in those of federal and civic movements and the average physician is becoming "politically minded".

We urge our members to support the following bills by personal contact or by writing to their local representatives. A number of letters from lay persons would be of great benefit.

Favor Senate 63—which was heard January 23 and on February 6 before the Joint Judiciary Committee. This bill asked that insurers of employees injured in industrial accidents and insurers under the Compulsory Motor Vehicle Liability Insurance Law be required to pay fees directly to physicians in certain cases.

Favor House 128—the vaccination bill.

Favor House 118—which requires applicants for registration in medicine to come from schools "approved by the Board."

Oppose Senate 162—which would give the chiropractors special privileges.

Oppose House 1198—which would give the mental healers special privileges.

Respectfully submitted,

WILLIAM H. ROBEY, *Chairman*,
THOMAS J. O'BRIEN,
FREDERICK E. JONES,
ARTHUR W. MARSH,
SHIELDS WARREN, *Secretary*.

APPENDIX NO. 5

REPORT OF THE COMMITTEE ON REVISION OF THE BY-LAWS

January 17, 1934.

In preparing this revision of the By-Laws the Committee has asked for suggestions from all the officers of the Society, from the President and Secretary of each District Society, from the Chairman of each Standing Committee, from the Ex-Presidents, and from other Fellows known to be interested. The text of the By-Laws of 1928 has been scrutinized, section by section, and revisions have been made according to the votes of the Council and Society and to other suggestions received, as seemed wise. The following are the chief changes recommended:

CHAPTER II. Meetings of the Society. Under Order of Business, the reports of committees and scientific communications have been omitted and a brief report of the state of the Society by the President has been substituted.

CHAPTER III. District Societies. The quota of members of each District Society to be elected to the Council has been changed from 1 for every 20 and majority fraction of 20, to 1 for every 30 and majority fraction of 30. Beginning in 1893 the proportion was 1 to 12; in 1908 the Fellows numbered 3,269 and the Council 158, after a change in the By-Laws passed the previous year, which changed the proportion to 1 to 20. This proportion has remained unaltered up to the present time. Today, owing to increase in the total membership of the Society, the Council numbers 279—a body of unwieldy size. If the new quota shall be adopted the Council will consist of 153 elected members and in addition 57 Fellows who are members by virtue of their offices, namely: Officers of the Society, Presidents and Secretaries of the District Societies. Ex-Presidents and Chairmen of Standing Committees, which would give a total of 210.

CHAPTER IV. The Council. The composition and duties of an auditing committee have been defined in detail and the sections of the chapter have been increased by one.

CHAPTER VI. Officers. Section 1. To the President's duties are added that he shall report in brief on the state of the Society at the annual meeting. The requirements that "he shall preside at the annual dinner and invite appropriate speakers and guests" is omitted as unnecessary, since there is no provision in the By-Laws for the holding of an annual dinner.

Section 2. Treasurer. Specific requirements as to the bonding of the Treasurer and specific authority to buy and sell securities have been added.

CHAPTER VII. Standing Committees.

Section 4. Authorization is given to the Committee on Ethics and Discipline to request the resignation of a Fellow.

Section 5. The duties of the Committee on Medical Education and Medical Diplomas have been revised in order to give the Committee greater power and efficiency in governing the admission of candidates who have graduated from schools or colleges not on the list approved by the Council.

Section 9, a new section, is added, establishing and defining the duties of the Committee on Permanent Home.

Section 10, a new section, is added, directing that important proposals requiring action, contained in forthcoming reports of committees to the Council, shall be published in abstract in the official organ of the Society at least one month prior to the annual meeting.

Respectfully submitted,

DAVID CHEEVER, *Chairman*,
P. E. TRUESDALE,
E. E. TYZZER,
A. S. BEGG,
W. L. BURRAGE, *Secretary*.

THE DIAGNOSIS OF CHRONIC ULCERATIVE COLITIS*

BY EVERETT D. KIEFER, M.D.†

THE severity of ulcerative colitis may vary within wide limits. It may be an acute, fulminating, rapidly fatal disease with a severe bloody diarrhea, high septic fever and prostrating toxemia, or it may be that the patient may not consider himself ill and complains only of a mild disorder in bowel function with some blood in the stools. The diagnosis of chronic ulcerative colitis requires, therefore, a working knowledge of the widely varying signs and symptoms which characterize the disease. The factors which produce the marked variations in the clinical features of ulcerative colitis are the severity or virulence of the infection, the localization of the infectious process in varying parts of the colon, the duration of the disease and the presence or absence of one or more of the numerous complications which may occur.

The following two cases are examples of the extreme limits within which the severity may vary. The first patient exemplifies the severely toxic, fulminating type of case which shows at autopsy massive destruction of the lining of the rectum and colon.

CASE No. 17706. Miss A. M., an unmarried girl of 20, came to the Clinic in August, 1930, complaining of severe bloody diarrhea, fever and vomiting of ten weeks' duration. She was admitted to the New England Deaconess Hospital markedly dehydrated, emaciated and anemic, vomiting repeatedly and having eighteen stools per day. The stools contained blood, pus and mucus but no ameba. The proctoscopic examination showed a severe ulcerative colitis. The x-ray of the colon by means of a barium enema showed a colitis involving the entire colon. The red blood count was 2.76 million; hemoglobin 65 per cent; temperature 101°. With parenteral fluids, blood transfusion and medical management she improved and was well enough to leave the hospital after seventy-one days. She continued to have frequent flare-ups of symptoms and never regained her full strength. In March, 1932, an ileostomy was done, but death occurred two weeks later from perforation of the colon.

The second patient was not ill, but complained of constipation and abdominal pain. The diagnosis of the true cause of her symptoms was made on the finding of the typical lesions by proctoscopic examination.

CASE No. 25252. M. E., an American housewife, aged 49, came to the Clinic November 16, 1931, complaining of dull, shifting, poorly localized abdominal pains of three weeks' duration. There was no diarrhea and she had been taking a daily laxative. The pain was not severe and there was no nausea. She did not feel ill except for some loss of appetite. On further questioning she gave a history of having had "intestinal flu" for two weeks in July, 1931. This consisted of a mild diarrhea with blood in the stools and slight fever. The physical examination was essentially negative. The proctoscopic examination showed submucous hemorrhagic areas on the rectal valves and at the rectosigmoid juncture. Other areas of mucosa were faintly granular in appearance and bled easily. There was a small amount of exudate present which consisted of mucus, blood cells and pus. No parasites were present. There was no fever. The blood counts were normal. The Craig test was negative. The x-ray examination by means of a barium meal and barium enema showed a large, smooth colon which was irritable and spastic, but was flexible throughout. With rest, dietary management and the omission of cathartics the bowel function became normal, the pain disappeared and the proctoscopic examination showed the rectal mucosa almost healed. One year later she reported that she was entirely well and had had no sign of a recurrence.

The site of the disease in the colon has a marked influence upon the symptoms. The diarrhea which is present in nearly all cases of ulcerative colitis is caused by the irritation of the colon from the inflammatory process which results in the rushing of the intestinal contents from the cecum to the rectum with the production of watery stools. If the proximal two thirds of the colon are not involved, this peristaltic rush may not be present. Furthermore, if the disease is confined to the rectum and lower sigmoid, so much spasm may be set up in these regions that actual constipation results.

In a small group of cases the disease is localized in the cecum and ascending colon. The bowel function in these patients is characterized by numerous, large liquid stools containing dark, partially digested blood. In general, the more extensive the involvement of the colon the greater are the constitutional symptoms, but the fever, toxemia and anemia are notably more marked in cases with involvement of the right side of the colon than in patients with only the rectum, sigmoid and descending colon affected. This is probably due to the ready absorption of toxic substances and the tendency to greater blood loss afforded by the cecum.

The following two case records illustrate the effects of localization of the disease in the right or left side of the colon. The first is a patient with constipation, bright blood in the stools and very few constitutional symptoms, caused by a localized inflammation in the rectum and sigmoid.

CASE No. 26160. M. H., an unmarried girl of 19, came to the Clinic on January 19, 1932. For one month she had noticed constipation. Mixed with each stool there was a small amount of slightly darkened red blood. Some mucus was also present. She had not stopped work as a telephone operator and she felt well except for some loss of appetite. The physical examination was negative except for slight pallor. The white blood count was 12,400, the red blood count was 3.8 million and the hemoglobin 80 per cent.

Proctoscopic examination showed typical ulcerative colitis of the upper rectum extending up into the

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sigmoid. There was considerable exudate present which on microscopic examination was found to consist of mucus and pus and blood, but no amebae were found. Roentgen examination by means of a barium enema showed much fecal material throughout the colon and marked spasm of the sigmoid. The Craig test was negative.

On treatment all symptoms quickly subsided and the rectal mucosa returned almost to normal, but there was a mild recurrence one year later from which she completely recovered.

The second patient had severe diarrhea, dark watery stools and grave constitutional symptoms caused by ulcerative colitis localized in the cecum and ascending colon. In this case proctoscopy gave no indication of the true nature of the disease and the diagnosis was based on the characteristic x-ray findings, the examination of the stools and the clinical course in the hospital.

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CASE No. 21039. A. M., a Canadian born housewife, aged 48, was admitted to the hospital April 4, 1931. For two months she had had loose stools which frequently contained blood. On admission she had diarrhea of fifteen watery stools daily, fever of 101°, abdominal distress, distention, vomiting, weakness and dehydration. The white blood count was 13,850; the red blood count was 3.3 million; the hemoglobin was 70 per cent. For four weeks the patient had persistent watery diarrhea, meteorism, a septic type of fever and considerable toxemia. The stools contained blood and pus but were negative for ameba and for B. tuberculosis. The white blood count fell to 5,850 and remained about 6,000. The Craig test was four plus positive. The blood culture and Widal were negative. The proctoscopic examination showed no evidence of ulcerative colitis in the rectum or sigmoid, but the Roentgen examination by means of a barium enema showed the characteristic appearance of ulcerative colitis involving the cecum and ascending colon. The treatment consisted of supportive measures, some antiamebic drugs and transfusion of blood. The patient had a severe general reaction and collapse following the transfusion, but recovery seemed to date from this incident and she finally became entirely well. In August, 1932, she suffered a recurrence for which she was treated in another city.

The onset of chronic ulcerative colitis is frequently sudden and has all the characteristics of an acute infection. Later a chronic stage may set in with clinical manifestations differing considerably from those of the acute stage. For this reason, careful consideration of the duration and progress of the disease is necessary in the correct interpretation of the clinical picture. The sudden, acute, severe type may terminate in a comparatively short time either in death or complete recovery, but the chronic, slowly progressive form frequently persists for years after the onset, during which time the systemic reactions to infection give place to those characteristic of a long-continued chronic infectious disease. In the latter type chronic diarrhea is the outstanding feature. The blood loss is usually slight so that the patient is frequently unaware of blood in the stools. Remissions occur occasionally in the chronic course but as the disease progresses complete return to normal bowel function does not occur, because of the irreparable changes which have taken place in the bowel wall. The following two case reports are illustrative of this point. The first patient suddenly became very ill with fever and bloody diarrhea. There was an acute infection of the bowel mucosa, but the thickening and contraction of the wall of the intestine had not yet set in. This patient also shows that if the acute toxemia stage is survived the prognosis for recovery of normal bowel function is much better than in the long-standing case with irreparable infiltration of the bowel wall.

CASE No. 25918. Mr. R. L., a 21-year-old student, became ill on the day following his return home for the Christmas holidays. The onset was characterized by malaise followed in a few hours by a severe chill. The following day his temperature was 103.5°; the pulse was 126, and abdominal cramps and diarrhea began. On the next day he had a severe sore throat which lasted for three days. On the third day after the onset he had twenty-six stools in twenty-four hours. He was stuporous and at times irrational. On the fifth day blood appeared in the stools. This was considerable for two or three days and then the amount became less. The maximum temperature was 104°. He was seen at his home on the eleventh day of illness and transfer to the hospital was advised. The physical examination showed marked weakness and some pallor, but was otherwise negative. Proctoscopic examination showed the mucosa to be inflamed, edematous and covered with a bloody, mucopurulent exudate. When the exudate was wiped away, free bleeding from numerous small points was seen. The white blood count was 13,800; the red blood count was 4.6 million; the hemoglobin was 75 per cent; the blood non-protein nitrogen was 114 mgs. and the plasma chlorides were 406 mgs. NaCl per 100 cc. of plasma. The blood culture and Widal were negative. The Craig test was four plus positive. The stools and exudate removed at proctoscopy were found to contain blood and pus but no ameba. One month after admission Roentgen examination of the colon by means of a barium enema and an air enema showed the characteristic appearance of ulcerative colitis involving the entire colon. The treatment consisted of supportive measures and antiamebic drugs. He was discharged from the hospital much improved five weeks after admission. Two years later he reported that he had been perfectly well and without any evidence of a recurrence.

The following case report represents the long-standing, chronic form of ulcerative colitis. Although the systemic symptoms were not marked, characteristic and irreparable damage had been done to the colon resulting in chronic disturbance in bowel function.

CASE No. 14693. E. F., a white American housewife, aged 37, was admitted to the Clinic on February 25, 1930. Her clinical history dated back five years when she had diarrhea with eighteen stools daily and was diagnosed "acute colitis." Since that time she had had recurrences and remissions, but for five months before admission she had had chronic diarrhea and had not felt so well as before. There had been small amounts of blood in the stools at times. The patient attributed this to hemorrhoids which had been giving her much trouble.

The physical examination was not remarkable. Proctoscopic examination showed the mucosa of the rectum and sigmoid to be edematous and the surface was dull, irregular and studded with numerous bleeding points. The rectum appeared contracted and the walls thickened. Microscopic examination

of the stools showed blood and pus but no amebae. The red blood count was 4.6 million and the hemoglobin was 70 per cent. The Craig test was four plus positive. The Roentgen examination of the colon by means of a barium enema showed the entire colon to be smooth, contracted and rigid, forming the typical "lead pipe" colon.

With dietary regulation and antiamebic therapy she showed some improvement, but her course since leaving the hospital has continued to be one of recurrences and remissions. Her general condition has remained fairly good. When last examined a partial stricture of the upper rectum was found.

The complications of ulcerative colitis are numerous. It frequently happens that the clinical picture is dominated by the signs and symptoms of the complication. In such instances it is not only necessary to recognize the complication, but its relationship with the primary disease should be understood.

Stricture of the rectum is one of the most common complications resulting from long-standing involvement of the rectum with ulcerative colitis. Each succeeding flare-up of the inflammatory process contributes to the progressive thickening and contraction of the bowel wall until marked strictures or even complete atresia results. When this occurs in the rectum there is practically complete loss of rectal function which sets up a train of symptoms not directly related to the primary disease. Incontinence of feces is the outstanding symptom resulting from this loss. Although the colitis may have subsided to the extent that there is no evidence of active inflammation present, such as blood and pus in the stools, there is a constant discharge of soft or liquid feces from the rectum. This condition usually causes complete disability on account of the difficulty in caring for this constant discharge. Although acute obstruction of the bowel is seldom caused by rectal strictures, the bowel function is considerably embarrassed by the narrowing near the outlet, giving rise to abdominal pain and liquid stools.

Perirectal abscess is a complication of ulcerative colitis which results from penetration of the infectious process through the rectal wall into the adjacent tissues. The symptoms arising from this condition are fever, pain, leukocytosis, anemia and fistula formation. The following case is presented because it illustrates both the conditions just described. The perirectal abscess formed some time after an ileostomy had been done for stricture of the rectum.

CASE No. 12832. Miss V. B., a white unmarried American girl, aged 26, came to the Clinic October 31, 1929, complaining of fecal incontinence, pain in the lower abdomen and rectum, and malnutrition. She gave a history of symptoms of severe ulcerative colitis beginning seven years before admission. She was very ill at the onset and was in bed about one year. Since then she had suffered from incontinence of feces and her general health had been so poor that she had been confined to her bed much of the time.

The physical examination showed her to be pale and emaciated. The spleen was palpable. Pressure upon the abdomen caused a discharge of liquid feces from the rectum. Rectal examination showed marked infiltration with stenosis and rigidity of the anal canal and lower rectum.

The blood examination showed the red blood count 4.4 million, the white blood count 8,750 and the hemoglobin 40 per cent. The stools contained no blood, pus, ameba or tubercle bacilli.

Roentgenologic studies by means of a barium enema demonstrated a second constriction of the rectum situated near the rectosigmoid juncture. The x-ray of the chest was not remarkable.

The patient was given a blood transfusion and a transverse ileostomy was performed. The postoperative course was uneventful.

Following the operation the patient's general condition showed marked improvement. Her weight increased from 78 to 98 pounds, the red blood count rose to 5.5 million and the hemoglobin to 65 per cent. Four months after discharge however, she returned to the hospital with fever, pain in both costovertebral angles and urinary frequency. She was found to have subacute bilateral pyelitis and an abscess in the rectum. The latter was drained through the anus.

Since then her general condition has been fairly good although she has had intermittent discharges of bloody exudate from the rectum.

Infiltrative thickening of the bowel wall with contraction and narrowing of the lumen of the gut is one of the most characteristic features of chronic ulcerative colitis. Consequently, at points where the ulceration has been particularly severe, scar tissue contraction produces narrowing to the point of stricture formation which may occur anywhere in the colon. Severe colic and other evidence of bowel obstruction may be the manifestation of this complication. Complete obliteration of the lumen of the colon is one of the frequent complications following an ileostomy for ulcerative colitis. As Dr. Lahey has frequently stated, a form of colitis severe enough to require an ileostomy may be expected to go on to complete destruction of the colon. The destruction of the mucosa and scar tissue formation may eventually result in one or more strictures. These allow pocketing within the bowel of collections of secretions and inflammatory products which frequently give rise to pronounced symptoms, such as abdominal pain, fever, leukocytosis, vomiting and prostration. Perforation may result unless drainage is established. The following case illustrates the symptomatology resulting from the complication just described.

CASE No. 29105. Mrs. M. P., aged 40, came to the Clinic July 29, 1932, complaining of attacks of severe abdominal pain. She had had ulcerative colitis for eight years. In 1928, a transverse ileostomy had been done elsewhere because of the severity of the colitis. Her general condition returned practically to normal, but for three years she had suffered from intermittent attacks of severe cramp-like abdominal pain. The attacks had become more frequent and severe during the previous few months and were accompanied by fever and prostration, and followed by a bloody rectal discharge. She had noticed that she was no longer able to pass irrigating fluid through the distal ileal loop and colon.

Examination showed almost complete atresia of the upper rectum and active ulcerative colitis of the rectal mucosa.

The attacks persisted in spite of conservative measures, so the patient returned to the Clinic in January, 1933, when a complete colectomy was done by Dr. R. B. Cattell, in two stages.

The colon was found to be constricted at the hepatic flexure and for a distance of several inches in the splenic flexure and descending colon the lumen of the bowel was completely obliterated. There was an active ulcerative process involving the cecum and ascending portion.

The postoperative recovery was uneventful and the patient is now clinically well.

Perforation of the colon with escape of colon contents into the abdominal cavity is a grave complication from which there is little chance of recovery. The event makes its appearance with sudden abdominal pain, vomiting, shock and collapse. Signs of a virulent peritonitis quickly develop with death ensuing within a few hours. The following case illustrates this complication:

CASE NO. 21122. Miss E. H., aged 30, a white, unmarried American girl, came to the Clinic and was admitted to the New England Deaconess Hospital on March 10, 1931, in a moribund condition. Blood in the stools had been noticed for the first time about a year before admission. For two months she had been very ill with severe, bloody diarrhea, vomiting, and fever of from 103° to 104°.

In the afternoon of the day before admission she collapsed suddenly with a severe pain in the abdomen. On admission to the hospital twenty-eight hours later she was markedly dehydrated and drowsy. The pulse was 140, the blood pressure 65 systolic and 50 diastolic. The abdomen was distended and tender throughout, particularly on the left side. An x-ray of the abdomen demonstrated free gas in the abdominal cavity.

Death occurred twelve hours after admission. At autopsy the entire colon was found to be involved in a massive ulceration. There was an acute perforation in the region of the sigmoid and numerous other holes appeared in the bowel when adhesions were separated. Acute generalized peritonitis was present.

Polyposis is one of the most common complications of ulcerative colitis, particularly in long-standing severe cases. The polypi formed in this condition consist of prolongations of masses of regenerating mucosa and are quite different from the adenomatous type of polyp found in benign polyposis of the colon. The symptoms of polyposis do not differ from those of the colitis itself, and the diagnosis is made on the roentgenologic and sigmoidoscopic findings.

DIAGNOSTIC PROCEDURES

One of the most important diagnostic procedures used in the study of colon disease is the proctoscopic examination. In all except about five per cent of patients with chronic ulcerative colitis, the appearance of the rectal mucosa is characteristic and diagnostic. In most cases the lower bowel appears narrowed by swelling of the mucous membrane. There is a dirty gray, bloody, mucopurulent exudate covering the wall. When this is wiped away there is disclosed a mucosa which is dull red in color with a rough, granular surface which bleeds freely with the slightest touch. The entire mucosa is uniformly involved, there being no areas of normal membrane to be seen. In severe cases there may be extensive sloughing of the mucosa so that the lining of the bowel literally hangs in shreds. In the mildest forms the mucosa is redder than normal, slightly swollen and shows numerous flame-shaped submucous hemorrhages.

The examination of stools or specimens of exudate removed from the rectum gives additional information regarding the nature of the colitis present. Pathogenic amebae are not found in the stools or exudate of chronic ulcerative colitis, except in rare instances in which there is coincidental infection with this parasite. The presence of frank pus in the stool is a strong indication of some form of ulcerative colitis if ulcerated hemorrhoids, anal fissures and fistula are excluded. A culture of the rectal discharges usually yields numerous organisms both pathogenic and nonpathogenic in variety, but has very little diagnostic value. Tubercle bacilli may be discovered by direct smear examination or by animal inoculation and are presumptive evidence of tuberculous enteritis, although the bacilli may enter the gastro-intestinal tract by means of swallowed sputum.

The x-ray appearance of the colon of a patient with chronic ulcerative colitis depends upon the virulence of the infection, the duration of the disease and the extent to which the colon is involved; in short, upon the amount of injury done to the bowel. The roentgenographic findings are explained by the underlying diffuse involvement of all the intestinal coats, which gives a characteristic picture. In the early, less severe case, the only roentgenologic evidence of ulcerative colitis may be extreme hyperirritability. This is manifested by massive expulsive contractions of the bowel accompanied by pain during the filling of the colon with barium emulsion, inability to retain the enema and an exaggerated emptying of the gut on evacuation of the enema. As the infiltrative process in the intestinal wall progresses there is an obliteration of the haustra, and that portion of the colon involved becomes smooth in outline, slightly contracted in calibre and shows an increasing loss of flexibility. Free patency of the ileocecal valve and slight dilatation of the terminal ileum are frequent findings. In the more severe and long-standing cases, complete loss of haustrations occurs and the colon becomes contracted both in length and in calibre. As the wall becomes more and more rigid the bowel fails to contract when the enema is expelled, which gives an x-ray appearance suggesting a stiff, rigid tube. This is frequently called the "lead pipe" colon. When the bowel is filled with a mixture of thin barium emulsion and air, the irregularities in the intestinal wall present a characteristic "moth eaten" appearance.

Polypi are best demonstrated by the double contrast method of filling the colon with air after an enema of thin barium emulsion has been expelled. Narrowing of the lumen, stricture formation, and complete obstruction of the bowel may be diagnosed by the barium enema.

DIFFERENTIAL DIAGNOSIS

The differential diagnosis of chronic ulcerative colitis embraces other forms of ulcerative colitis and functional disorders of the colon. New growths in the rectum and colon should not be confusing if the patient is examined by means of digital examination of the rectum, sigmoidoscopy and roentgen ray.

The symptomatology of amebic dysentery may be very similar to that of chronic ulcerative colitis. The stools in all cases with bloody diarrhea should be carefully and repeatedly examined for ameba histolytica by an experienced technician. Cultures of the fresh stool in suitable media increase to some extent the accuracy of the search for the pathogenic ameba. If diarrhea is present, only the vegetative forms of the parasite are looked for, since the cysts occur only in more solid stools. The proctoscopic examination of the mucosa of the rectum and sigmoid is nearly always sufficiently diagnostic to distinguish between chronic ulcerative colitis and amebic colitis. The mucosal ulcers caused by amebae are larger and more definite, with necrotic bases and shaggy overhanging margins. The surrounding mucosa is comparatively normal in appearance, while in chronic ulcerative colitis there is a diffuse involvement of the entire mucous membrane. In very severe cases of both diseases, the proctoscopic appearances are more nearly alike due to extensive secondary infection of the ulcerated bowel. Sometimes amebae can be demonstrated in scrapings taken from the ulcers when they cannot be found in the stools. The roentgenologic examinations cannot be depended upon to distinguish between chronic ulcerative colitis and amebic dysentery.

The Craig complement fixation test for amebic dysentery cannot be relied upon as a diagnostic measure because it is frequently positive in typical cases of chronic ulcerative colitis which show no other evidence of infestation with amebae.

Tuberculosis of the colon may give rise to symptoms simulating those of chronic ulcerative colitis. Although the diarrhea may be severe the loss of blood is much less pronounced. It is distinctly uncommon for tuberculous colitis to occur in a patient without active tuberculosis elsewhere, usually in the lungs. The tubercle bacilli can frequently be demonstrated by direct smear of the stools or by animal inoculation. The x-ray findings are fairly characteristic and usually show the chief involvement in the ileocecal region progressing toward the left side of the colon, while ulcerative colitis characteristically begins in the rectum and progresses toward the cecum. The hypermotility and filling defects which give an irregular corrugated outline of the bowel cannot be relied upon to distinguish tuberculosis from regional ulcerative colitis.

Sporadic cases of bacillary dysentery may closely resemble the acute type of ulcerative colitis. The constitutional symptoms and fever may be pronounced in both conditions. The bacilli of Flexner, Shiga or other strains may be obtained from the stools in the first three or four days after the onset of bacillary dysentery, but after this period secondary infection may overgrow the bacilli and cause them to disappear. After about the tenth day the blood serum contains specific agglutinins in high titre. Proctoscopic examination in bacillary dysentery shows marked diffuse hyperemia of the mucosa with shallow, irregular erosions.

Chronic diarrhea caused by functional bowel disorders may be confused with ulcerative colitis, particularly if there are bleeding hemorrhoids present and the patient has not been proctoscoped. Proctoscopic examination shows a normal mucous membrane in functional cases and demonstrates the hemorrhoids or fissures as the source of the blood. In this condition pus is not found in the stools, which is in itself sufficient evidence to throw doubt on a diagnosis of ulcerative colitis. Although the x-ray may show little distinction between mild early ulcerative colitis and irritable colon, the smooth contracted, haustraless colon is not found in the latter condition. A careful history of the patient's symptoms, a microscopic examination of the stools and a competent proctoscopic and roentgenologic examination of the rectum and colon will definitely clear up any confusion between ulcerative colitis and functional bowel disorders.

SUMMARY

The symptoms and signs of chronic ulcerative colitis are extremely variable.

The factors which influence the variations in the clinical features of this disease are the following: the severity or virulence of the infection, the localization of the infectious process in different parts of the colon, the duration of the disorder and the presence or absence of one or more of the numerous complications which may occur.

These factors have been discussed and abstracts of illustrative cases have been presented.

The important diagnostic procedures such as stool examinations, proctoscopy and roentgenologic studies have been discussed.

The differential diagnosis between chronic ulcerative colitis and other diseases giving rise to similar clinical conditions has been outlined.

THE PATHOLOGY OF THE GASTRO-INTESTINAL TRACT IN PERNICIOUS ANEMIA AND SUBACUTE COMBINED DEGENERATION OF THE SPINAL CORD*

(A Study of 151 Autopsies†)

BY MADELAINE R. BROWN, M.D.‡

IT is probable that pernicious anemia is due to the inability of the gastric juice to interact with certain substances found in meat, yeast and other sources of the Vitamin B complex, or to the inability of the intestine to further digest or absorb the products of this gastric reaction[1]. The etiology of this inadequate gastro-intestinal physiology is still obscure, although it is now sixty-five years since Austin Flint called attention to the possible dependence of pernicious anemia on degenerative changes in the gastric mucosa. Since that time many authors in many languages have described atrophic gastritis, until this picture is now considered a part of the pathology of pernicious anemia and subacute combined degeneration of the spinal cord. As some degree of myelin degeneration is almost as common as and often precedes megaloblastic bone marrow, the two aspects of one disease have been mentioned as of equal importance throughout this study. Today ataxic paraplegia presents the major therapeutic problem, since the liver diet has so adequately controlled the anemia.

MATERIAL

This study includes all the postmortem examinations performed since 1897 on patients who had suffered from pernicious anemia and degeneration of the spinal cord at the Boston City, the Massachusetts General, and the Peter Bent Brigham Hospitals. All instances in which there was any question of the diagnosis have been omitted. There were 151 autopsies diagnosed pernicious anemia out of a total of 18,200. Although this study was undertaken primarily to determine histologically the severity of atrophic gastritis in pernicious anemia, it became at once evident that the number of gross lesions of the gastro-intestinal tract was also very striking.

From the table, it appears that the most common source of infection in these 82 protocols was the gall-bladder, since cholecystitis or cholelithiasis occurred 24 times. Abdominal tuberculosis appeared 16 times, and appendicitis, salpingitis and ulcerative enteritis eight, seven and six times respectively. Hyperplasia of the bone marrow was found in every patient. If metastatic carcinoma or lymphoblastoma was present in the bone marrow, the case was omitted. Active pulmonary tuberculosis ap-

TABLE OF GROSS LESIONS INVOLVING THE GASTRO-INTESTINAL TRACT

No. of Autopsies	Diagnosis
35	Chronic Peritonitis (Adhesions)
	8 probably due to appendicitis
	7 due to tuberculosis (3 tuberculous, 4 probably tuberculous)
	7 due to chronic cholecystitis or cholelithiasis (1 with hypertrophied pylorus, 1 with diverticulitis)
	7 due to salpingitis
	2 acute and chronic, probably tuberculous
	2 cholecystectomies with chronic peritonitis
	1 acute cholecystitis with chronic peritonitis
	1 diverticulitis and colostomy with chronic peritonitis
10	Chronic Cholecystitis or Cholelithiasis or both
6	Chronic Ulcerative Colitis and Enteritis
6	Intra-abdominal Tuberculosis
	3 tuberculous retroperitoneal glands
	1 miliary tuberculosis with chronic tuberculosis of retroperitoneal glands
	1 tuberculous spleen
	1 tuberculous spleen and liver
1	Septic Spleen with dilatation of duodenum
1	Hypertrophied Pylorus
13	Benign Tumor (3 myoma, 9 polyp, 1 both myoma and polyp)
	12 of stomach (2 with cholecystitis, 1 with adhesions from gall bladder to duodenum)
	1 myoma of jejunum with cystic gastritis and jejunitis
2	Large Myoma Uteri
	1 uterus 30 x 24 x 3½ cm., a Negress on whom cesarean section was attempted. Tuberculous spleen and chronic cholecystitis also present
	1 uterus 32 x 18 x 12 cm., had pushed intestines aside
1	Carcinoma Stomach
1	Carcinoma Appendix with ulceration of ileum
5	Anomaly
	1 aberrant pancreatic tissue duodenum
	1 hour-glass stomach and atrophied gall-bladder adhered to colon
	1 band from duodenum and pylorus to colon
	1 cecum turned on itself
	1 stomach down over pancreas, colon V-shaped
1	Enteroptosis, severe
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†The material for this study was obtained from the Departments of Pathology, Boston City Hospital, Massachusetts General Hospital, and Peter Bent Brigham Hospital.

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peared six times and tuberculous pneumonia once*. Chronic endocarditis was a very frequent finding.

A large majority of the adhesions were multiple and often the contents of the peritoneal cavity were matted together. Perisplenitis, perihepatitis or adhesions of the appendix to the cecum were not included, since these abnormalities did not appear to interfere with the functioning of the intestinal tract.

The number of benign gastric tumors occurring in this series was the most unexpected finding of the study. The incidence in these 151 autopsies was eight per cent, while that of the 18,200 autopsies performed by these three hospitals, was .003 per cent. There were two instances of myomata and one of both myoma and polyp. Of the nine other instances of gastric polypi, three had several polypi in the stomach and three had polypi elsewhere in the alimentary tract.

Hale-White[3], Wallgren[4], and Meulengracht[5] have described postmortem findings of ulcerative enteritis, chronic intestinal obstruction, intestinal parasites and benign gastric tumors associated with pernicious anemia.

HISTOPATHOLOGY OF GASTRO-INTESTINAL TRACT

Although microscopic descriptions of the stomach appeared in 61 autopsy reports, sections from only 42 specimens are available at the present time. The picture common to all but one of the sections was that of a chronic gastritis. The term chronic gastritis is used to describe an interstitial infiltration of lymphocytes in the gastric mucosa. This infiltration was sometimes so marked that an actual hypertrophy of the mucosa ensued. Intermingled with the lymphocytes were plasma cells and eosinophiles. Often many of the glandular tubules had disappeared and fibrous tissue had replaced them. At times the fibrous tissue showed hyalin degeneration. Some of the glands had dilated into mucous cysts containing many goblet cells. Acidophilic cells were present in five of the 42 gastric mucosae, but in three of these only an occasional one was seen.

The gastric mucosae containing the mucous cysts simulated the picture of the upper intestinal mucosa in sprue in which, following inflammation, mucous cysts form and often break open to the surface[6].

Twenty of the 42 gastro-intestinal tracts examined histologically had had the benefit of liver therapy. There was no noticeable change in the pathological picture which would agree with the observation that the secretion of hydrochloric acid is not influenced by treatment[7].

Although a control series of gastric mucosae from patients succumbing to other diseases contained occasional masses of lymphocytes, no uniform infiltration of these cells, replacement of glands by fibrous tissue or mucous cysts were seen.

In addition to the six instances of gross ulcerative enteritis, the intestinal mucosa was examined microscopically 13 times. Chronic enteritis (infiltration of lymphocytes, plasma cells and eosinophiles) was noted in nine. Cystic degeneration of the jejunum, hyalin degeneration of the duodenum and the disappearance of all the glandular elements of the ileum were each noted once.

Passey[8] obtained a biopsy of the gastric fundus at operation on a patient with pernicious anemia and on one with achylia gastrica without anemia. In both, lymphocytes choked the opening of the secretory ducts and the number of acidophilic cells was reduced. Faber and Bloch[9] in 1900 emphasized that although atrophy of the gastric mucosa was not necessarily present, some interstitial inflammatory changes were. In all of Wallgren's[4] 16 microscopic studies, the gastric glands were short, the fibrous tissue increased and an infiltration of leucocytes was present.

NERVOUS SYSTEM

In the ordinary eosin-methylene blue stained sections of the stomach and intestine, one could find no marked degeneration of the cells in Auerbach's or Meissner's plexuses. One sympathetic ganglion showed no changes. Since Addison's time[11], investigators of the pathology of pernicious anemia have noted degeneration of the celiac ganglia, Auerbach's and Meissner's plexuses[12] and lesions in the lateral horns of the spinal cord[13].

In those instances of subacute combined degeneration in which the brain, spinal cord and root ganglia were studied microscopically, myelin degeneration, loss of nerve fibres, and cell atrophy were found. Usually the myelin degeneration occurred in both the dorsal and lateral tracts of the cord. There was no decrease in the amount of degeneration of either of these tracts following liver therapy; in fact, the cord lesions were more frequent and more severe since 1929*. There were no instances of subacute combined degeneration without hyperplastic bone marrow. The spinal cord had been studied in 15 of the 41 autopsies at the Peter Bent Brigham Hospital and in eleven gave evidence of myelin degeneration. In only two was the degeneration confined to the dorsal tracts and these both occurred previous to 1929. Although four of the cords were normal in a Weigert stain, two had clinical signs of the onset of posterior tract degeneration. The dorsal root ganglia from six autopsies were examined. They contained degenerating cells and proliferation of capsule cells in four, and normal cells in two

*Barron found no active pulmonary tuberculosis in 93 autopsies of pernicious anemia, but describes one clinical case[2].

*This result might be expected due to the prolongation of life, although Greenfield and O'Flynn[10] found less lateral tract degeneration in their autopsies performed since 1929.

instances. A normal cord accompanied one normal ganglion, while a cord with some thinning of the dorsal area accompanied the other. The cords with the four ganglia containing degenerated cells had severe degeneration of both posterior and lateral tracts. These facts may indicate that the nerve cells are attacked primarily and the myelin secondarily, in combined degeneration of the spinal cord.

DISCUSSION

Sixty of the 151 cases of pernicious anemia gave gross evidence of old intra-abdominal infection, while all but one histological examination of the alimentary tract gave evidence of a chronic inflammatory reaction. All but one of the five gastric polypi examined microscopically were probably secondary to a chronic gastritis. They consisted of an evagination of mucous membrane overlying a fibrous tissue stalk. There was a chronic inflammatory reaction within the fibrous tissue and extending throughout the entire mucosa. Bloomfield states that in cancer the gastritis is universal and intense, in ulcer superficial and localized in the antrum. In cancer arising from an ulcer no widespread lesion is present. Transitions from gastritis to actual cancer have been observed[14]. Since gastric carcinoma often gives the same clinical picture and the same pathological picture of the entire gastric mucosa as that in pernicious anemia, it is possible that chronic gastritis precedes both polyp and carcinoma. Partial intestinal obstruction or adhesions were frequent, due either to an anomaly, tumor, or inflammation. Although the adhesions often did not obstruct the lumen of the intestine, they would have interfered with the alternate relaxation and constriction of peristalsis, which is as important for normal digestion and absorption as an intact mucosa. The gastritis was more severe near the pylorus and most of the polypi occurred in this area. Hypertrophy of the pylorus has been noted in pernicious anemia[15, 16]. In view of these facts it seems probable that regurgitated duodenal contents, with or without bacteria, played a part in the causation of the gastritis.

The cause of the early disappearance of the acidophilic cells offers an interesting problem. These cells are quite different in structure from the chief cells in that they are penetrated by a network of minute ducts, communicating with the lumen of the gland by one canal. It is possible, therefore, that the acidophilic cell is more susceptible to alkaline regurgitated material or to pressure atrophy, should the lumen of its duct become blocked by mucus. Inflammation is not the cause, because in examining the tissue surrounding gastric ulcers, the acidophilic cells are not only present but appear increased in number due to the fact that they are often the only cells remaining in a gland.

The small amount of mucous, non-acid, gastric secretion found in pernicious anemia is readily explained by the histological picture. There were two mucosae in this series which possessed many acidophilic cells. One showed cystic degeneration of the gastric mucosa, while the other, although the stomach was normal, had diverticuli and partial obstruction of the intestine. Both had cord degeneration at autopsy. Without histamine the first had no free hydrochloric acid, but had a fasting combined acidity of 52 per cent. The second, at every examination, had free hydrochloric acid in the gastric juice, and did not improve on liver therapy. The three gastric mucosae containing an occasional acidophilic cell had produced no free hydrochloric acid with histamine clinically.

Passey[8] quotes two autopsies, one of which had had free hydrochloric acid clinically and many acidophilic cells at autopsy, while the other had neither free hydrochloric acid nor acidophilic cells.

Possible factors involved in pathogenesis of pernicious anemia and subacute combined degeneration of the spinal cord:

I. Extrinsic
   - A. Deficient diet
   - B. Inadequate mastication of food

II. Intrinsic
   - A. Interference with digestion or absorption
     1. Inadequate gastric or intestinal mucosae due to inflammation, new growth, surgical interference, heredity, deficient diet, nerve degeneration.
     2. Destruction of gastric or intestinal secretions by material from mouth, stomach or intestine.
     3. Interference with peristalsis or competency of pyloric valve.
   - B. Inability to store or utilize absorbed products.

Some literature on postmortem findings of obstruction, infection and tumors of the gastro-intestinal tract in pernicious anemia has been quoted. Let us now examine the clinical and experimental literature. Inflammatory lesions and, to a less extent, tumors of the alimentary tract have been reported clinically. Lueders and Scherer[17] noted that chronic gall-bladder disease caused achlorhydria and it has long been known that disease of the gall-bladder is a very common accompaniment of primary anemia.

Keefer et al[18] described 16 cases of chronic dysentery with all the clinical signs of pernicious anemia; two of these had cord degeneration. Perey[19] in 1920 reported nine laparotomies on patients with pernicious anemia and in some cultured colon bacilli from the gall-bladder and

in others streptococci from the appendix and spleen.

Balfour[20] collected 47 records of benign tumors of the stomach. Anemia was the most common symptom. Ataxic paraplegia was present twice. Free hydrochloric acid was absent in all but one of the 13 gastric analyses performed on patients with polypi. Free hydrochloric acid was present in 21 of the 23 gastric myomata.

Castle et al[1] reported a patient with multiple intestinal anastomoses and pernicious anemia. During liver therapy the intrinsic substance returned to the gastric juice. It seems probable therefore that at this point in the disease, there was a lack of absorption of necessary substances but the gastric mucosa was still capable of secreting the intrinsic factor. Seyderhelm[21] has performed some experiments on dogs to determine whether partial obstruction of the small intestine could cause anemia. Two of his animals developed a hyperchromic anemia with macrocytosis and died in eight and ten weeks respectively. He believed that the ileum contained the same flora as the colon, a condition similar to that found in pernicious anemia. He also performed enterostomies on ten patients with profound primary anemia, following which there was rapid improvement of the blood for a few days, but death supervened in nine[22]. Closure of the enterostomy in the tenth case was followed by an exacerbation of the disease and death.

In addition to disease of the gastro-intestinal tract, artificial changes such as resection or short circuiting of the small intestine have led to pernicious anemia through interference with digestion and absorption[23].

Hurst[24] believes that the achylia gastrica is primary, functional, and probably constitutional in pernicious anemia, since the only marked departure from the normal in Passey's biopsies was the appearance of leucocytes in the gastric glands. However, one of the gastric mucosae described in this series was entirely normal and there are several recorded instances of gastric juice in which the antianemic factor was present[1, 23]. Apparently this disease may occur in the presence of normal gastric digestion when there are functional disturbances of the intestinal tract.

It has been suggested that the changes found in the gastro-intestinal tract are secondary to the deficiency of Vitamin B complex. Beriberi and pellagra, however, show very little in the way of gastro-intestinal pathology. The gastric mucosa in pellagra is usually normal, but at times shows hyperemia[25]. In beriberi, congestion and ecchymoses are found[26]. In experimental Vitamin B_1 deficiency in monkeys McCarrison[27] describes ecchymosis of the stomach and small intestine and inflammation of the colon. In many of his animals the colon was infested with entameba histolytica. Cowgill[28] found retention of undigested food in his animals on a Vitamin B_2 deficient diet. On the other hand, Cramer[29] found no significant changes in the intestinal mucosa using a B deficient diet. Granting that changes do occur, they seem to have no resemblance to those found in pernicious anemia. It is also significant that liver therapy has not improved the condition of the gastro-intestinal tract.

It has also been suggested that the atrophy of the gastric mucosa is a trophic change due to a degeneration of the sympathetic nerve cells either in the ganglia or in the central nervous system. To test this theory, the celiac ganglia were removed in cats. There were no essential changes in the gastric acidity, digestion, gastric mucosa or cells in the ganglia of Auerbach's or Meissner's plexuses up to eight months following operation[30].

Abnormal motility of the gastro-intestinal tract is frequently present in pernicious anemia. Friedenwald states that all of his 76 patients had some gastro-intestinal symptoms, but that 26 complained of vomiting and 28 of diarrhea. Therefore, abnormal peristalsis was present in 71 per cent of the patients[31]. The abnormalities of the intestine described in this series were of such a character that they would have interfered with peristalsis. Although inflammation, tumor and obstruction are associated with a certain amount of local destruction of the mucosa, probably far more important is the fact that by interference with normal motility they limit digestion and absorption throughout the intestinal tract. The two large myomata of the uterus described above may be comparable to pregnancy in which a so-called primary anemia occurs, since the anemia develops during the latter half of pregnancy or following delivery when the motility of the intestine has been most affected.

Although inability to store absorbed products was mentioned as a possible factor in pernicious anemia, only one instance of chronic liver disease was noted.

CONCLUSIONS

1. At postmortem examination of 151 instances of pernicious anemia, 82 had gross lesions affecting the gastro-intestinal tract.
2. Forty-one of 42 histological studies of the stomach showed chronic gastritis with or without a loss of glandular epithelium. In 37 the acidophilic cells had disappeared.
3. Achylia gastrica in pernicious anemia is due to a loss of acidophilic cells.
4. A possible sequence of events: chronic gastritis followed by polyp or carcinoma is pointed out.
5. Histological studies of the intestine both with and without gross lesions of the gastro-intestinal tract showed chronic enteritis.

6. In this series liver therapy has caused no change in the histopathology of either the gastric mucosa or the spinal cord.

7. Pernicious anemia and cord degeneration occurred once in the presence of a normal gastric mucosa, but never in the presence of an entirely normal gastro-intestinal tract.

8. Interference with the normal motility of the gastro-intestinal tract over a long period of time may give rise first to inadequate digestion and absorption and secondly to atrophic gastritis and inadequate gastric juice, thus establishing a vicious cycle.

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MEDICAL TREATMENT OF GASTRO-JEJUNAL ULCER*

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IN the recent literature on the subject of gastro-jejunal ulcer, the following points have been brought out:

(1) That the occurrence of gastro-jejunal ulcer indicates a constitutional tendency on the part of the individual to develop ulcer, i.e., the ulcer diathesis. In other words, the gastro-jejunal ulcer, while it occurs in a new site and under artificially produced conditions, is a recurrent ulcer, just as much as if it were a recrudescing ulcer in the site of the original duodenal or gastric ulcer.

(2) That the new gastro-jejunal lesion is produced in the new site for two reasons: first, because an operation has been performed upon a stomach within the walls of which there has been at least irritation and probably inflammation attendant upon an ulcer there or in the adjacent duodenum; secondly, because the jejunal walls cannot be exposed without risk of injury to the more or less inadequately neutralized peptic chyme from the stomach.

(3) That the gastro-jejunal ulcer is found much less frequently in cases of gastroenterostomy for gastric ulcer, than in those operated upon for duodenal ulcer, and occurs with great rarity after gastric resection, a fact probably associated with the higher pre- and postoperative acidity associated with duodenal ulcer and the hypo- or anacidity following resection.

Attention is drawn by Fohl* to the great discrepancy in reports on incidence of gastro-jejunal ulcer, the reported percentages of cases developing gastro-jejunal ulcer after gastroenterostomy varying from three to thirty-four per cent. He believes that statistical studies are very difficult: first, because of the fact that many gastroenterostomies are ill-advised, and therefore conducive to the formation of gastro-jejunal ulcers; and secondly, because patients who develop gastro-jejunal ulcers rarely return to the surgeon who performed the operation, but seek advice from a gastro-enterologist.

The general opinion seems to be that gastroenterostomy without adequate preliminary medical treatment in a hyperacid stomach in which gastritis is present, is very likely to result in this new complication of gastro-jejunal ulcer.

In the group of acutely obstructed cases of duodenal ulcer which were formerly operated upon and gastroenterostomy done to relieve obstruction, it has been satisfactorily demonstrated in recent years that this operation is

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usually not necessary for this purpose, since almost all of these cases respond to medical treatment with complete relief of the spasm and acute inflammatory reaction.

The purpose of this paper, however, is not to denounce or to defend gastroenterostomy as a logical surgical procedure, but to discuss a possible sequel to the operation, the gastro-jejunal ulcer.

While it is undoubtedly true that the gastro-jejunal ulcer is a form of peptic ulcer analogous to duodenal and gastric ulcer, and should be considered as such in a discussion of the subject, there are certain phases which individualize it.

First as to etiology: While the gastric and duodenal mucosae are accustomed to contact with more or less acid chyme, it has been shown experimentally and proved clinically that the jejunum and ileum are unable to resist the peptic activity of the gastric chyme. There is therefore established at once the possibility of chemical injury to a greater degree than exists in the other two types of ulcer. The constitutional tendency toward development of an ulcer, the ulcer diathesis, is furthermore always present in cases of gastro-jejunal ulcer who have had surgical procedures, gastroenterostomy or partial gastrectomy for an actual lesion. It may be mentioned here that there exist undoubtedly gastroenterostomy cases who present gastro-jejunal ulcers without any cicatricial evidence of an original lesion, some at least of whom must have had this surgical procedure because of symptoms only. Clinical experience, at least in our opinion, tends to disprove what seemed by experimental observation to be a type of physical injury peculiar to gastro-jejunal ulcer, the presence of non-absorbable suture material in the stoma. The other theories of etiology, infection, circulatory disturbances, spasm, etc., are as tenable for this type of ulcer as for those in the stomach or duodenum. Spasm of the stoma, with complete occlusion of it, is not infrequently observed and is one of the radiographic diagnostic signs. To summarize, the various theories as to ulcer etiology may all be equally tenable for gastro-jejunal ulcer, and two of them, that of chemical injury due to acid chyme and that of the constitutional tendency, are augmented in the case of gastro-jejunal ulcer.

The diagnosis of gastro-jejunal ulcer is attended by greater difficulties than is the case of gastric or duodenal ulcer. A history of the same type of distress as occurred before the surgical procedure, either gastroenterostomy or partial gastrectomy, is certainly suggestive of recurrent ulcer either at the old site or in a new one. If the distress is intensified to the degree of a severe pain and tends to occur to the left of the umbilicus, the evidence for gastro-jejunal ulcer becomes very suggestive. The history of hemorrhage in a case in which before subtotal gastrectomy or gastroenterostomy, that history was absent, is suggestive of a gastro-jejunal ulcer rather than of recurrent duodenal ulcer, since in our experience the former have a greater tendency to hemorrhage than gastric or duodenal lesions.

The presence of a high normal or a high acidity in a suspicious case adds suggestive data, though the absence of hyperacidity is not important. The x-ray findings, which in our experience have proved most dependable, are first, tenderness over the stoma; secondly, irregularity or niche at the stoma or in the adjacent jejunum or stomach; thirdly, the statement of the patient that the stoma, palpated under the fluoroscope, is the site of distress when it has occurred; fourthly, marked spasm or occlusion by spasm of the stoma; fifthly, residual fleck at the stoma two to five hours after the meal; sixthly, the trickle of barium from the stoma to the colon with the opaque meal, or from the colon to the stomach with the opaque enema, indicating a gastro-jejunocolic fistula. The x-ray findings may be entirely conclusive, but in our experience it is not infrequent that there is no x-ray finding which is suggestive, and yet at operation a definite lesion, which because of its size or location has eluded the x-ray examination, is found.

The chief difficulties in diagnosis are in the differentiation of this organic lesion and functional disturbances due to spasm of the gastric walls and stoma, and dilatation and spasm of the small and large intestines, or what Fohl calls dynamic disturbances of emptying of the stomach and intestines. The interference with the normal course of the alimentary stream can in itself produce symptoms through jejunal dilatation and spasm, not unlike those of jejunal ulcer. There have been under care at the Clinic three patients, who after gastroenterostomy suffered periodic attacks of severe pain with nausea and vomiting, the pains severe almost to the point of producing shock, in whom no other cause could be found except spasm of the jejunum, and who were relieved and have remained symptom-free since functional tranquillity was restored and maintained by antispasmodic treatment (bland food and atropine and abstinence from irritants). The condition known as irritable colon, again because of spasm and abnormal dilatation, may produce symptoms which in a patient who has had a gastroenterostomy or partial resection might easily bring up the question of gastro-jejunal ulcer. It is often easy, however, in those cases where x-ray evidence of colon irritability or atony is present, and where there is no definite evidence of jejunal ulcer, to explain the symptoms on a functional basis, only to find later that the patient actually has a jejunal ulcer, and the converse may likewise be true; namely, that a patient has been explored because of a strong suspicion of gastro-jejunal ulcer, with entirely negative findings, and his symptoms have later been relieved by

medical management of intestinal function. It has been our unfortunate experience in an occasional case with no definite clue to the diagnosis, to attribute the persistence of symptoms after general measures for improvement of digestion have failed, to neurosis and so-called gastro-intestinal invalidism, only to find later that the patient actually had a definite gastro-jejunal ulcer. Cases have also been referred to us with a history of careful examinations in other clinics, negative findings, and a diagnosis of gastric neurosis, only to have a gastro-jejunal ulcer found on subsequent operation. It is therefore true that with a history of gastroenterostomy, recurrent indigestion, and no definite evidence for jejunal ulcer, suspicion of that lesion must still be entertained until some other cause, organic or functional, is found to explain the symptoms, and permanent relief is obtained from treatment of such a condition.

With a diagnosis of gastro-jejunal ulcer established, the question of treatment is usually a perplexing one to the physician as well as the patient. Many of the group who have gastro-jejunal ulcers had a gastroenterostomy before adequate medical treatment was used. Their surgical treatment was from their point of view a complete failure. They are anxious to avoid further surgery and hopeful of obtaining satisfactory results from conservative medical measures. It is not at all uncommon for a patient who discovers that after surgical treatment for ulcer he has a new type of ulcer, to refuse all forms of treatment. For example, in our series, although sixty-three patients were suspected of having a gastro-jejunal ulcer, only thirty-seven were persuaded to have some form of treatment, a relatively much smaller group than is tractable in gastric or duodenal ulcer; and this was true, though most of these patients had their gastroenterostomies done elsewhere and have no reason to resent our advice. But whereas originally it was probably, in most of these cases, quite possible to bring about a satisfactory remission or even a cure without surgery, in many cases the nature of the new lesion makes surgery and radical surgery the treatment of choice. The most formidable complication of ulcer, the gastro-jejunocolic fistula, is added to the two pre-existing dangers of ulcer, perforation and hemorrhage. The occurrence of hemorrhage is greater in gastro-jejunal ulcer than in the other types of ulcer, and finally it has been our experience that medical treatment is less effective and its results less lasting. The reasons for this constitute an interesting field for thought. It is true usually that the symptoms are much more severe than in simple gastric or duodenal ulcer, and more intensive therapy is required to control them. It is rare that a case with gastro-jejunal ulcer can be made comfortable without bed treatment carefully carried out and without nocturnal administration of treatment. If alkalies are used, it is frequently difficult to give a sufficient amount to control symptoms without producing alkalosis. Furthermore, it is a question whether the effect of alkalies in an area where an alkaline material normally bathes the mucosa, is as beneficial in preventing further erosion and allowing healing, as in the stomach and duodenum. Perhaps for all these reasons, the medical treatment of gastro-jejunal ulcer is, in our opinion, much less satisfactory than in gastric and duodenal ulcer, though the lesion is fundamentally of the same type.

The following tables illustrate some of the findings in thirty-seven treated cases of gastro-jejunal ulcer:

GASTRO-JEJUNAL ULCER—37 CASES (Treated)

	Male	31
	Female	6

Ages (37 cases)		
Between	20-29	3
"	30-39	13
"	40-49	7
"	50-59	11
"	60-69	2
"	70-79	1

Symptoms (37 Cases)		
Pain	33	(89%)
Nausea—Vomiting	7	(2%)
Hemorrhage	16	(43%)

Number of years (37 cases) between gastroenterostomy and onset of symptoms from gastro-jejunal ulcer	
Under 6 mos.	9
Between 6 mos. and 1 yr.	1
" 1 and 2 yrs.	7
" 2 " 3 "	3
" 3 " 4 "	2
" 4 " 5 "	2
" 5 " 6 "	3
" 6 " 7 "	4
" 7 " 8 "	1
" 8 " 9 "	1
" 9 " 10 "	2
" 12 " 13 "	1
20 yrs.	1

Free HCl (31 Cases)	
Below 25	9 cases
Between 25 and 40	6 "
" 40 " 45	8 "
Over 50	8 "

Medical Treatment (23 Cases) (Results)

Recurrence but able to carry on	11
Good	4
Good for short follow up (no later follow up)	4
Operated later	2
No follow up	2

The usual small incidence of female patients is found—six in a total of thirty-seven (16.2 per cent). This is probably explained by the fact that gastroenterostomy for duodenal ulcers, in which the ratio of men to women is much higher, is much more likely (probably because of the higher acid) to produce gastro-jejunal ulcer than is gastroenterostomy for gastric ulcer.

The ages vary according to the age at which gastroenterostomy was done. One case was of special interest because at the age of five weeks he had had a gastroenterostomy for pyloric stenosis, and at the age of twenty, had a massive hemorrhage followed by typical ulcer distress. It is interesting to note that almost fifty per cent had symptoms of gastro-jejunal ulcer within two years after gastroenterostomy.

The symptoms were, in eighty-nine per cent of the cases, pain, and this was usually described as being "more to the left" than the original pain, and of much greater severity. Hemorrhage, which occurs in about twenty per cent of gastric and duodenal ulcers, occurred in forty-three per cent of these gastro-jejunal ulcers.

There was hyperacidity in fifty per cent of those thirty-one cases whose records show results of tests.

The results of medical treatment, which in much larger groups of gastric and duodenal ulcer show between fifty and sixty per cent of good results (no recurrence in five years) are much less satisfactory in this type of ulcer. In this small group of twenty-three medically treated gastro-jejunal ulcers, fifty per cent had recurrences within a very short time and only eighteen per cent maintained freedom from symptoms one and a half to two years.

The conclusions to which we are led by this study of a group of cases perhaps too small to justify conclusions, are (1) that because of the possibility of gastro-jejunal ulcer, gastroenterostomy should be done only after careful consideration of the possible consequences—it is possibly justified only in cases of long healed duodenal lesions with cicatricial stenosis of the pyloric sphincter; (2) that when present, the question of treatment is a difficult one, medical treatment offering little hope of permanent cure and persistence of the ulcer involving dangers greater than those of duodenal or gastric ulcer, because of increased tendency to hemorrhage and the possibility of gastro-jejunocolic fistula; (3) that the occurrence of gastro-jejunal ulcer probably identifies the patient who has it as belonging to that group of individuals in whom hyperacidity or continuous secretion of acid makes any conservative treatment practically hopeless so far as cure is concerned.

UNUSUAL ETIOLOGY OF "FENDER FRACTURE"

BY ROBERT ULIN, M.D.*

FRACTURE of the external condyle of the tibia, that is, the so-called fender or bumper type, as described by Cotton and Berg[1] is generally known to result from direct trauma as by impact of an automobile, or from indirect trauma by falling from a height. Some writers briefly mention the possibility of forcible adduction or abduction of the leg as a cause of fracture of the condyles.

In practically all reported cases there has been a history of adequately violent trauma to explain the resulting fracture. The following cases, however, illustrate how an apparently trivial injury can cause exactly the same type of fracture.

CASE 1. Mr. J. O., aged 51, while crossing the street, about to step up on the curbstone, missed the curb, twisted his ankle and fell. As he was falling he felt a snap and sharp pain in his knee and was unable to walk.

Examination at the hospital three days later showed knock-knee deformity, edema of thigh and leg, effusion into the knee joint, ecchymosis in the popliteal space with tenderness over upper end of tibia, and especially the external condyle. Motions were painful and there was abnormal lateral mobility.

X-ray shown in figure 1.

All laboratory tests to rule out pathological basis for fracture (including biopsy at open reduction) were negative.

FIG. 1.

CASE 2. Mrs. E. T., aged 38, standing on a curbstone with a child, stepped forward taking the

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child's hand as they were about to cross the street. As she did so she felt a sharp pain in the knee and was unable to bear weight on the leg.

FIG. 2.

Examination showed effusion into the knee-joint, marked tenderness over the internal lateral ligament and external condyle of the tibia and some lateral hypermobility.

X-ray shown in figure 2.

CASE 3. Mrs. B. H., aged 53, beginning to cross the street, saw the traffic lights change, turned about, felt a sharp pain in the left knee and fell to the ground.

FIG. 3.

Examination showed the knee slightly swollen and tender; no visible deformity; all motions restricted by acute pain; acute tenderness over the internal lateral ligament.

X-ray shown in figure 3.

These three cases show clearly that the extent of the injury may be entirely out of proportion to the degree of violence. The element of abduction has frequently been mentioned as probably an important factor in the causation of fracture of the external condyle of the tibia, whether the main force be that of compression as the case of a fall upon the feet, or direct violence as in being struck by an automobile.

In 30 experiments by Hultén[2] with hyperabduction on anatomical specimens there occurred 13 fractures of the tibial condyles and one of the femur, and 16 tearing of ligaments. The ligaments tore in a certain order in the act of hyperabduction: first the medial collateral ligament, then the posterior cruciate, and finally the anterior cruciate. The fractures were compressed fractures of the external tibial condyle with a cup-shaped depression of the lateral surface of the joint.

The lateral femoral condyle does not cover the entire surface of the lateral tibial condyle; the latter extends about ½ cm. beyond the femoral condyle. This part is therefore not compressed but remains as a wall or is chipped off by the wedging-in of the sharp outer edge of the femoral condyle.

These fractures of the condyle are caused by a force in the axial direction, which by hyperabduction is directed through the lateral femoral and tibial condyles. And if such a fracture occurs during life, this axial force is intensified by the strength of the muscles and the motive force caused by the momentum of the body during motion. The muscles inserted about the knee-joint are placed, when the joint is flexed and the body rotated as in guarding against impending injury, in a position of powerful action, calculated by Fick[3] to exert a pressure of one to two thousand kilograms. The axial components of the muscular and motive forces have an effect exclusively on the condyles, so that the force on the latter is greater than the tension in the ligaments, and the bone yields to this force, with the resulting fracture described above.

The extent of the injury is found to be in no definite proportion to the severity of the trauma, nor is the nature of the fracture characteristic of any particular etiologic agent. It is for this reason that Hultén, reporting a series of 91 such fractures, one of which occurred in a soldier during the simple act of turning an "about face", classifies them not by the mode of injury but as "Kompressionbruche" or "Spaltbruche" according to the appearance by x-ray.

CONCLUSION: In all instances of fracture of the external tibial condyle there is one thing in common, namely, an abduction force accompanied by weight-bearing in an axial direction. That these forces alone, without any appreciable trauma, are sufficient to cause fractures which simulate those resulting from considerable violence, is clearly borne out by the three cases cited above.

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MEDICAL PROGRESS

RECENT PROGRESS IN PHYSIOLOGY

BY PERCY G. STILES, PH.D.*

MUSCLE CONTRACTION.—Repeated reference has been made in these reviews to the changing conceptions which have prevailed respecting the relation between chemical and mechanical phases of muscular activity. The drift from traditional to novel interpretations is still going on as the results of investigation accumulate. If we venture to characterize the general tendency through the span of a generation we may say that chemical events once held to precede the mechanical are to a steadily increasing extent considered to follow it. Once it was believed that oxidation must occur before the development of tension but we have long known that this is not the case. Then we fixed upon the transformation of glycogen to lactic acid as essential to movement; in the light of more recent work it became apparent that this could not be maintained. Concisely it may be said that processes formerly regarded as releasing energy for contraction have been transferred to the after-period and associated with restoration.

This transference has reached an absolute limit in the view expressed by Ritchie[1]. The bold but attractive thesis is expounded that no chemical change whatever precedes contraction. All the reactions that have been analyzed with such care, even the breakdown of phosphagen, may pertain to recovery. The muscle awaiting stimulation is thus like a bent bow ready to be released by means of a trigger; forcible motion is the expression of a purely physical process and the manifold chemical reactions contribute nothing to it.

The Right Cerebral Hemisphere.—One of the most important divergences between the organization of the nervous system in man and in the lower animals is recognized in the unequal significance of the right and left cerebral hemispheres for human life. In the average individual the superior skill of the right hand points to a superiority in the neutral development of the left hemisphere. Language in its various aspects, receptive and expressive, appears to have its correlated mechanisms in the same region. In the left-handed subject the dominant hemisphere is assumed to be the right. It is only within a few years that we have been made to realize the striking degree of such dominance and the corresponding subordination of the opposite hemisphere.

Dandy[2] in 1928 reported the results of surgical removal of the right cerebral hemisphere in five cases. One of the patients survived for more than three years and, while practically paralyzed on the left side, seemed to have suffered no impairment of personality. Strong confirmation of this possibility is afforded by the experience of Gardner[3]. The patient from whom he excised the right hemisphere was a woman of 31. Patients requiring this drastic operation have usually been of advanced age and the youth of this subject was much in her favor. She was in most satisfactory condition when last seen, nearly two years after the ordeal.

A surprising fact is that this woman recovered the power to walk. Her left arm remained crippled and she had, strictly speaking, no power to control the muscles of the left leg. But when walking was undertaken this extremity came to perform its part in reflex fashion governed, we may suppose, by the stimuli incident to its own movement and contacts and the mediation of centers lower than those of the cortex. Vision to the left of the mid-plane was lost; hearing seemed equal in the two ears. No mental deterioration was discovered.

These observations seem to imply that the loss of the left hemisphere would to all intents and purposes abolish mentality. There would seem to be no logical occasion for its surgical removal. Disease localized in it must, in its progress, work toward the same extinction of intelligence. One might, indeed, be tempted to entertain the idea of a reduplication of equipment such that personality might survive the destruction of either hemisphere. Against this is Dandy's testimony that when the circulation in the middle third of the left hemisphere has been unavoidably interrupted no return of consciousness has ever been noted.

A New Technique for the Study of the Cortex.—Dusser de Barenne has devised a new experimental method applicable to the analysis of cerebral function in animals which may well be mentioned.[4] This is desirable not so much for the sake of results so far secured as to emphasize features of cortical organization which are often ignored. The technique consists essentially in the application of heat to the surface of the brain. Of course the cells of the most superficial layer are the first to be injured and then those of the deeper layers in succession. Specimens can be taken for microscopic study and from them it is possible to determine how long the contact with the heating apparatus must be maintained to extend the injury to the depth

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desired. Using this measure the investigator will be enabled to compare the effects of shallow and deeper cortical damage with considerable exactness.

In early studies of cerebral localization the cortex was discussed as though it were a single layer, a sheet having but two dimensions. Bolton and others have done much to correct this assumption and we know that we have to reckon with a stratified affair. The third dimension is significant and unlike functions may be mediated in different strata underneath one small patch of pia mater. The writer is fond of the statement that the cortex is not like a map but more like an atlas. The experiments of Dusser de Barenne himself have helped to show that the motor and sensory areas overlap in the mammalian brain, a possibility which the earlier workers disregarded.

In the Field of Nutrition.—The subject of instinctive selection of food deserves more attention of a scientific order than it has yet received. Lay writers have sometimes represented it as infallible and have implied that a great deal of time has been wasted in technical research concerning matters properly left to nature. Granting that instinct in feeding is remarkable one may still expect to find that it has its limitations. This is illustrated in an interesting way by the studies of Kon[5].

Young rats were given access to a variety of foods in separate dishes. Their consumption of each article was accurately followed as was also their rate of growth. Calculation showed that when they exercised this freedom in choosing a diet they included protein only to equal 6.5 per cent of the total ration. When the experimenter mixed the food of the animals so that they had no latitude in selecting this kind or that he found that he could, apparently, do better for them than they could do for themselves. When the percentage of protein in the mixture was increased to 20, growth was much more rapid than before. It may be argued that the slower growth will produce a healthier adult rat and that the instinct exhibited was in fact a correct one. But this position is difficult to maintain and the demonstration is at least suggestive.

Since the matter of appetite has been touched upon it is natural to refer to the use of insulin as an agent to stimulate a gain in weight (Blotner)[6]. The sequence of events is simple. A well-known insulin effect is a whetting of the appetite or gross hunger. The usual obstacle to putting on weight is inability to eat enough to secure the desired result. The patient receiving insulin treatment very readily increases his intake and it may be raised decidedly above the current expenditure. It may be recalled that some people have gained weight by fasting and others have reduced by eating between meals as advised by Benedict. The paradox is explained by the sharpening of appetite in the first case and its blunting in the second.

A minor question but one deserving careful study has been dealt with by Jackson[7]. The matter at issue is the possible impairment of nutrition which may result from the inclusion of paraffin oils in the alimentary income. When such preparations are taken to promote intestinal evacuation there would be a chance, one might think, that the fat-soluble vitamins would dissolve in the foreign oil. This not being digestible and leaving the tract unabsorbed the loss of food value might be significant.

Jackson has found that when butter-fat and paraffin oil are deliberately and intimately mixed vitamin A does in fact distribute itself between the two. To the extent that it enters the mineral solvent it is unlikely to reach the circulation. On the other hand, with the usual mixture of foods differing both physically and chemically from one another, the partitioning of vitamin between its native medium and the paraffin is limited. With a proper diet the margin of safety is such that small accidental losses of this kind can be ignored.

From time to time our attention is drawn to the modifying influence of micro-organisms on the processes taking place in the digestive tract. A curious example is the synthesis of sulphur compounds in the intestine of the sheep (Ramaiyya)[8]. Sulphur in the elementary form is nearly inert and insoluble but we know that there are bacteria which can incorporate it in their own substance. It now appears that such appropriation of sulphur is accomplished by the intestinal flora in the animals under observation. Proof is afforded by the recovery from the wool of extra quantities of the sulphur compound cystine in proportions varying with the inorganic sulphur fed.

The Sympathetic Innervation of Skeletal Muscle. We used to find it convenient to say that the sympathetic was that department of the nervous system affecting peripheral structures other than skeletal muscle. For some time now we have been deprived of the right to make this attractive generalization. It has become quite well established that the sympathetic has endings in connection with striped muscle fibers although their action remains less clear than that of the more obvious cerebrospinal elements. A recent contribution is that of Corkhill and Tiegs.[9] They show that stimulation of the sympathetic supply to a particular muscle has a favorable effect on the total performance of that muscle when responding to impulses sent over its proper motor approaches.

This is in agreement with previous observations. It has a new aspect in making the specific statement that the restorative action is limited to indirect stimulation, that is, to excitation by way of the nerve. The facts might be expressed by those who constantly invoke the chronaxie of muscle by saying that the sympathetic readjusts this property when fatigue is deranging it, attuning the muscle to the type of stimulus fur-

nished by the nerve or, in technical language, making the two tissues isochronous.

Hormones. Few will be likely to contradict the assertion that physiology is developing most rapidly in the vast department of the Internal Secretions. The past year has seen the publication of a much needed book having to do with this field, Hoskins' "The Tides of Life."[10] In an increasing number of instances we find our attention directed to active substances formed in various organs and having predominantly to do with local function. The vagus hormone which mediates in cardiac inhibition is the best known example of such an agent. The "sympathins"—the plural being used because there are at least two—in a corresponding manner transmute the impulses arriving over sympathetic paths to chemical equivalents.

McDonald and McDonald[11] present evidence regarding the automaticity of the mammalian heart which it is appropriate to include. They have shown that portions of the right auricle may be relied on to beat well when isolated in warm, oxygenated Locke's solution. Comparable preparations from the left auricle have much less rhythmic power and at best give only occasional contractions. When, however, extracts of right auricular tissue are added to the bath it elicits from the left auricle strong and regular beats typical of the venous side of the heart. So it may be concluded that the superior automatic property of the right auricle is not altogether due to the organization of the living protoplasm of the myocardium but is conditioned by the chemical environment which these cells create for themselves.

Another research giving prominence to the chemical mediation of excitation effects is that of Rosenblueth and Rioch[12]. The objective responses measured were those of the nictitating membrane in the cat. Typical smooth muscle is involved. Earlier work had established the fact that many of the contractile cells in such tissue are not connected with nerve-fibers. The morphological picture at once suggests that if these isolated cells are to share in the response to stimulation they must be activated by a hormone diffusing to them from cells actually reached by nerve-impulses. The present experiments are entirely in accord with this view. The relation between strength of stimulus and extent of contraction resulting is shown to be strikingly different for skeletal and smooth muscle.

For at least fifteen years we have assumed that the mechanism of skeletal muscle is a set of contractile units which act independently. For the heart we have pictured a syncytium with protoplasmic continuity permitting the widest spread of the active process. In regard to smooth muscle there has been less positiveness. Some protoplasmic bridging between the cells has been indicated but there have appeared to be frequent obstacles to the extension of activity. The conception that a stimulating substance diffuses from certain foci when the nervous system is playing upon smooth muscle is clarifying and attractive. Such a hormone might continue to act after the termination of the nervous phase, and this is in agreement with the protracted responses of the tissue in question.

One is led to ask whether the excitation of skeletal muscle may not also depend on a chemical intermediary. This is discussed by Rosenblueth and Rioch. The extreme shortness of the latent period would seem to be evidence against such an interposed factor in the process of stimulation. But it is not conclusive and the authors hold that certain facts associated with summation are best explained by postulating a mediator. The distinctive feature of the situation must be the strict limitation of the hormone-like body to the units in which it is generated. Its diffusion is not permitted. Its existence must be transient.

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CASE RECORDS
of the
MASSACHUSETTS GENERAL HOSPITAL

ANTE MORTEM AND POST MORTEM RECORDS AS USED IN WEEKLY CLINICAL-PATHOLOGIC EXERCISES

EDITED BY RICHARD C. CABOT, M.D.
F. M. PAINTER, A.B., ASSISTANT EDITOR

CASE 20091

PRESENTATION OF CASE

A thirty year old American housewife entered complaining of fever, pain in the chest and cough of three weeks' duration.

Present illness. Four weeks before entry the patient had a tonsillectomy under ether anesthesia at another hospital. She was discharged home after twenty-four hours. She remained in bed and felt weak and depressed. One week later she began to have cough and to be conscious of fever. Her appetite remained fairly good for three weeks. Ten days before entry she became conscious of a "terrible odor and taste in her mouth," and at the same time began to experience pain on inspiration in the posterolateral part of the right chest. This was treated by her doctor with strapping, heat and morphia, and disappeared in seven days. At that time, three days before entry, her physician tapped her chest, inserted a needle quite low in the back, and withdrew half a cupful of foul pus. The patient failed to improve, and continued to cough and run a temperature.

Family history. Her mother died of tuberculosis. The patient had been married ten years. Three children were living and well. She had had no miscarriages.

Past history. She had had measles, mumps, pertussis and scarlet fever in childhood, rheumatic fever at eleven and again at twelve, and influenza at fifteen, followed by mastoiditis. Her catamenia had been irregular since the birth of her last baby, three years before admission. During the same interval the patient had gained "enormously" in weight, with the development of marked abdominal obesity.

Physical examination. She was rather obese, slightly cyanotic and dyspneic. There was marked herpes labialis. The eyes and throat were negative. There was marked pyorrhea. The thyroid was not felt. The apex impulse of the heart was not seen or felt. The action was regular. The sounds were of good quality. There were no murmurs. The pulses were equal and synchronous, of normal volume and tension. The blood pressure was 130/65. The right side of the chest from the level of the third rib downward was markedly flat to percussion, with diminished breath and voice sounds. There were no râles. The abdomen was negative except for obesity. The reflexes were normal.

On entry the temperature was 102°, the pulse 140. The respirations were 35.

Laboratory work. Blood: hemoglobin 70 per cent, red cell count 4,340,000, white cell count 27,000 to 33,700. Urine: specific gravity 1.020 to 1.025, a very slight trace of albumin, bile on two occasions, no sugar. The sediment showed rare red and white cells, rare granular casts. The sputum was foul, slightly purulent; no tubercle bacilli; many short chains of cocci. The vomitus on one occasion showed a three plus guaiac. The icteric index was 8. The van den Bergh was 1 to 1.5 milligrams, direct reaction.

CLINICAL DISCUSSION

DR. FREDERICK T. LORD: The problem presents a number of interesting aspects from the point of view of diagnosis. The chest disturbance follows tonsillectomy and the mode of onset is consistent with an inflammatory process beginning in the lung. The cough without expectoration and the fever suggest absence of communication with the bronchi for a time and later sufficient connection with the air passages to cause the "terrible odor and taste". It may be assumed from the occurrence of pain along with the malodor that at about this time there was extension of the pulmonary process to the pleura. This evolution and grouping of initial symptoms are suggestive of a lung abscess arising in consequence of the aspiration of infected material from the upper parts of the respiratory tract. An origin by detachment of a thrombus from the veins in the region of the tonsil is unlikely, as the resulting lung infarct would be likely to give rise to pain and bloody sputum as initial symptoms.

FURTHER HISTORY

The day after entry a rib resection was done under local anesthesia with the patient sitting up, and an exploratory tap was made below the angle of the right scapula in about the ninth interspace. Foul pus was encountered at this point. Ten centimeters of the ninth rib was then resected below the angle of the scapula and a large empyema cavity containing over a pint of rather thin foul pus was encountered. The visceral pleura was greatly thickened and coated with fibrin. No respiratory exchange through the wound could be detected, although it was felt that the cavity probably communicated with a lung abscess. The incision was near the dependent aspect of the cavity. Two soft rubber tubes were sewed in for drainage.

Following operation the temperature remained essentially unchanged. It was of picket fence type, with daily variations from 99° to 102°. The pulse was 90 to 120. The respirations were 20 to 25. The patient felt more comfortable and was definitely less dyspneic. Drain-

age was profuse. A bacteriologic examination of the pus from the thorax showed Gram-positive cocci which failed to grow aerobically but did grow anaerobically. In direct smear spirochetes and Gram-positive bacilli were noted. Ten days after operation the condition had changed little. It was noted that large strands of necrotic lung tissue were being evacuated through the drainage tubes.

On the sixteenth day after entry at ten p.m. she had a fit of coughing, more severe than usual. At half past eleven her condition suddenly became worse; the skin was clammy, the pulse weak, and the respirations shallow. No blood was coughed up and none appeared in the drainage tubes. She was placed in an oxygen tent without improvement, and died at one o'clock the next morning.

Further Clinical Discussion

Dr. Lord: At operation the finding of empyema is not inconsistent with a pulmonary abscess with extension of the inflammatory process into the pleura.

It is desirable to discuss other possibilities in diagnosis. The question of foreign body inhalation should always be considered with such a clinical picture, but with ingress into the air passage of a foreign body there are likely to be suggestive features in the history, physical signs of bronchostenosis and significant x-ray findings. Malignant disease arising in a bronchus may in rare instances be the cause of pulmonary suppuration, but malignancy does not seem likely here. The history of tuberculosis in the family suggests the possibility of the acquisition of the disease, but the clinical aspects here are not those of tuberculosis.

The finding of cocci in the pus and their failure to grow under access of air is worthy of comment. Purulent pleural fluids, negative for bacteria on microscopic examination and culture, should be suspected of a tuberculous origin. Microscopic examination of stained specimens alone is insufficient to exclude the presence of pyogenic organisms, and culture should be made under both aerobic and anaerobic conditions.

Dr. George W. Holmes: This film was taken with the patient prone and shows dullness throughout the greater portion of the right lung area with some displacement of the heart toward the opposite side.

This is an earlier film. It shows a large bright area here which probably represents air; below it a fluid level and collapsed lung. The heart is somewhat displaced.

This is an attempt at a lateral view. You see a fluid level with air above it. This is the posterior part of the chest and would correspond to the region occupied by the lower lobe.

There is nothing in any of these films to give one a lead as to the condition in the lung itself. The process seems to lie largely in the pleural space. There is nothing unusual in the appearance of the heart shadow other than the displacement.

Dr. Lord: From the rheumatic fever on two occasions when she was young one might suspect some undiscovered cardiac lesion, an endocarditis possibly, or evidence of old pericarditis.

I might say with respect to the treatment that in a review with Dr. King our experience here leaves us in a quandary with respect to the merits of neoarsphenamin in these cases. The outlook in patients treated early with neoarsphenamin is somewhat better than in a group treated in a similar fashion but without neoarsphenamin. Our data are not wholly complete in regard to a review of this matter. The early administration of neoarsphenamin is used on the basis that these processes are due to spirochetes among other anaerobic organisms, and that neoarsphenamin may play a part in relieving that disturbance.

Dr. Tracy B. Mallory: By the time this patient came into the hospital it was quite obvious that she had empyema. One question might be raised regarding her early treatment. When the story suggested abscess and there was no definite evidence of pleural involvement, was it a safe procedure for her doctor to introduce a needle through a possibly clean thoracic cavity into a pulmonary abscess? Do you feel that there is much danger of so producing an empyema?

Dr. Lord: We have always felt that this is a risky procedure and not to be done without due consideration of the hazards. There is not only the danger which Dr. Mallory mentions, of infecting an uninfected pleura, but also risk that in running a sharp instrument into the pulmonary cavity one may injure one of the blood vessels that line the wall or traverse the lumen of the cavity and the patient may bleed to death.

Clinical Diagnoses

Empyema, right.
Lung abscess, right.
Intrapulmonary hemorrhage?

Anatomic Diagnoses

Pulmonary abscess, right.
Empyema, right.
Acute and chronic pleuritis.
Operative wounds, rib resection and drainage of lung abscess.
Pulmonary edema.
Organized bronchiolitis and bronchopneumonia.
Cholelithiasis.

Pathologic Discussion

Dr. Mallory: The autopsy in this case showed a fairly large empyema cavity and also a lung abscess. The surgeon had apparently broken directly into the abscess rather than into the empyema cavity. The operative wound communicated through the abscess with the empyema cavity, but there was not a large enough opening to result in effective drainage of the latter.

The immediate cause of death was not very evident. There was a diffuse and very marked pulmonary edema. The bronchi were filled with pinkish froth, but there was no free blood in them. A great many of these cases have a terminal massive hemoptysis as the immediate cause of exitus. In other cases one gets a rapidly spreading pneumonia, but that also was not found here. I think a sudden cardiac failure with pulmonary edema was the presumable mechanism in this case.

The heart valves, in spite of two attacks of rheumatic fever, were negative.

There was no evidence of any significant degree of tuberculosis in this patient.

CASE 20092

Presentation of Case

First admission: A thirty-seven year old Canadian housewife entered the hospital complaining of chronic cough of sixteen months' duration.

Five years before admission she developed a head cold which persisted for five or six months. This was characterized by fits of coughing producing a white frothy sputum, never bloody. She thought she did not feel up to par during this illness. A physician made a diagnosis of bronchitis and advised rest. Except for one or two colds a year she was perfectly well after this seizure until sixteen months before admission, when she had an attack very similar to the one five years before admission. The coughing attacks were associated with white frothy phlegm, sometimes slightly yellow. There was also a sensation of tightness across the upper part of the chest which seemed to give her the feeling that her breathing was inhibited. She developed slight shortness of breath on exertion. There were no chills or fever. During the coughing attacks she often had an aching pain in the right shoulder. Talking for any length of time or extreme excitement would often bring on a coughing attack. She did not cough during the night and was able to get seven or eight hours' sleep each night. Syrup of hydriodic acid often gave her relief. Her physician took a chest plate and told her that she had chronic bronchitis. Two months and a half before admission she visited the Outpatient Department and was told to rest in some part of the country where the climate was dry. She spent two weeks in New Hampshire with no apparent relief. One month before admission she became weaker and developed more severe shortness of breath. The pain in her right shoulder became more marked. Her weakness increased. During the past three weeks she had noticed a few specks of blood in her sputum. She had never had night sweats, hemoptysis, orthopnea, anorexia, or any marked loss of weight.

Family history. Her father died of Bright's disease. Her mother was living and well. One brother and one sister were living and well. There was no history of tuberculosis.

Marital history. She had been married ten years. Her husband, one son and one daughter were living and well. There had been no miscarriages or stillbirths.

Past history. As a child she had mumps, measles, pertussis, scarlet fever and typhoid fever. Ten months before admission she had a tonsillectomy which did not benefit her bronchitis. Since her attack of scarlet fever she had had a slight discharge from her right ear at various times. The last one began one year before admission and lasted ten months. The rest of her past history is non-contributory.

Physical examination showed a rather thin, tanned, pleasant woman coughing frequently with the production of a watery non-tenacious sputum. The pupils were slightly irregular and reacted poorly to light but normally to accommodation. Her throat was red and chronically inflamed. The tonsils were absent. The heart was negative. The blood pressure was 122/90. Examination of the lungs showed slight dullness at the left apex with diminished breath sounds, voice sounds and tactile fremitus. There were numerous moist coarse râles throughout both lung fields, front and back, except at the bases, which were clear. The diaphragm did not descend so far on the left as on the right. The abdomen was negative.

The temperature was 98.8°, the pulse 100. The respirations were 20.

Examination of the urine showed at all examinations large numbers of white cells but no red cells or casts. There was no albumin. The specific gravity ranged between 1.018 and 1.030. Examination of the blood showed a red cell count of 4,700,000, a hemoglobin of 80 per cent. The white cell count was 13,000, with 76 per cent polymorphonuclears, 18 per cent lymphocytes, 4 per cent large mononuclears, 2 per cent basophils, no eosinophiles. Several sputum examinations were negative for tuberculosis both by direct examination and by guinea pig inoculation. The sputum was large in amount, liquid, white and frothy. It contained large numbers of Gram-positive cocci, rod-shaped bacilli, a few white blood cells and occasional yeast organisms. A Hinton test was negative. A tuberculin test, 1 to 20,000, was negative. A

tuberculin test at 1 to 1000 was slightly positive, after twenty-four hours producing a wheal .5 centimeter in diameter, but was negative after forty-eight hours.

An x-ray examination done in the Outpatient Department two months before entry showed a diaphragm that was somewhat limited in excursion with its outlines slightly irregular on the left. The hilus shadows showed marked increase in width and density and the larger lung markings were prominent in the upper portion of the chest. An examination two months later showed no definite change. The sinuses and teeth were negative.

She was put on postural drainage twice a day. She preferred to sleep on her abdomen. A note was made on the twenty-first day that there was a great reduction in the râles at the bases, with an increase of moist musical râles in the apices. On the twenty-fifth day a bronchoscopy was performed. The trachea and bronchi were found to be normal with the exception of a small amount of glairy mucus in both main bronchi. The terminal bronchi were seen. The carina was sharp edged. There was not enough pus for a specimen.

On the twenty-eighth day a lipiodol injection was done and a film showed the bronchial tree on the left side to be normal. On the right a small amount of lipiodol entered the lower main bronchus and penetrated into its smaller bronchioles. There was no definite evidence of bronchiectasis.

The temperature rose to 101° and it was felt that she had developed an upper respiratory infection. She was treated with ethyl iodide inhalations. She continued to have loud moist râles at both apices and bases, and if kept in a position with the head down and the feet up the râles appeared to increase in the apices and if vice versa the râles increased in the bases. She was discharged at the end of ten weeks not much improved.

History of interval. While at home the patient followed a régime of bed and chair rest and postural drainage for twenty minutes twice a day. The cough continued as before and she raised two to three ounces of sputum. Because of gradual weakness she discontinued the postural drainage for the two months previous to her second entry. During this time she had attacks of dyspnea while at rest lasting from half an hour to three hours and associated with substernal constriction and soreness. During the last few weeks before entry she developed this soreness in her left side and leg. During the two months preceding the second entry she began to lose her appetite and felt discomfort after meals. Solid food increased her discomfort and for the two weeks before reëntry she was on a liquid diet. She had no hemoptysis, chest pain, night sweats or edema. She believed that she might have had some fever at night and at times early in the morning.

Second admission, four months after her previous discharge.

Physical examination showed scattered moist râles and squeaks throughout both chests.

Laboratory examinations were essentially the same as on her first admission. A Fontana stain on her sputum showed occasional spirochetes.

X-ray examination showed very little change. There was still lipiodol in the left lower lung field.

It was felt that she was getting weaker. She was given two x-ray treatments of her chest in the hope of relieving her dyspnea. Her temperature chart was normal throughout. It was felt that the x-ray treatment had helped her somewhat. She was discharged at the end of a month to return in one month for further radiation.

History of interval. After her discharge she remained in bed and became progressively worse. She felt much worse in the morning. Her sputum continued to be frothy and occasionally blood-streaked. She was unable to take much nourishment and vomited a great deal.

Third admission, ten weeks after her second discharge.

Examination showed an emaciated woman, moderately cyanotic, breathing rapidly and using all her accessory muscles. There was some clubbing of the fingers. The chest was flat. The respirations were forced, rapid, short and interrupted. There was a bronchial type of breathing, almost cavernous, in both apices, especially on the right. Both lungs were full of râles and musical sounds. The blood pressure was 95/70. There were a few small axillary glands.

The temperature was 98°, the pulse 120. The respirations were 60.

Examination of the urine was as before. Examination of the blood showed a red cell count of 4,300,000 with a hemoglobin of 65 per cent. The white cell count was 14,300, with 73 per cent polymorphonuclears, 20 per cent lymphocytes, 1 per cent eosinophiles. The sputum examination was as before.

She went rapidly downhill, developed a pneumonia picture with consolidation at the right base, and died on the sixth day after admission, approximately three and a half years after the onset.

Differential Diagnosis

Dr. Donald S. King: I think that I have been given a somewhat tricky case. It is difficult to make very much out of the history. It is not typical of any ordinary chest condition. The patient had had several attacks of cough with large amounts of white frothy sputum. There was some blood streaking. She had had

pain in the right shoulder which may or may not be of significance. There was increasing dyspnea and weakness and toward the end a great deal of difficulty in breathing. It therefore seems that there must have been something interfering with respiration.

The physical examination again gives us little positive information. From the story as presented there were râles throughout both lungs, at times more marked over the upper chest and at times in the lower. These râles were usually moist but sometimes musical. On one occasion there is a record of diminished breathing at the left apex. If this had been constantly present it would have been an important sign. Nevertheless, bronchoscopy did not show obstruction in the left upper lobe bronchus and I assume that there were no persistent physical signs of obstruction in this region. The râles which come from bronchial obstruction by foreign body or a new growth are almost always unilateral and it is difficult to explain bilateral râles unless there is pressure or obstruction involving both bronchi.

The laboratory examinations are important because they rule out, so far as possible, the diagnosis of tuberculosis. The sputum had been repeatedly examined for tubercle bacilli and the guinea pig test of the sputum was negative. The skin test with tuberculin was not made with a strong dilution. The urine was full of pus on several occasions, but we cannot attach much significance to this finding as recorded.

Certain other important studies were made, chief among them being bronchoscopy. The physical signs were not such as to indicate bronchial obstruction because as noted already, the râles were bilateral. So far as I can remember, we have had no cases in the Thoracic Clinic with bilateral signs which showed on bronchoscopy a definite growth in the bronchus. There are, however, certain cases reported in the literature which have shown bronchial tumor even with these signs. In the case under discussion, bronchoscopy gave a good view of the terminal bronchi and did not show any growth. We have, however, had a recent case which came to autopsy and showed a neoplasm so far down in the bronchus that bronchoscopy would not have shown it.

Is there any x-ray film?

DR. TRACY B. MALLORY: Unfortunately it is lost.

DR. KING: That is too bad. The report as given to me notes that "the hilus shadows are markedly increased in width and density". This finding was not given to you in the record as read. It is very important to know whether this is so, because a malignant process or enlarged nodes in the hilum region pressing on both bronchi might give sufficient pressure to account for the dyspnea and cough as they occurred in this case. It is probable that the x-ray does not give a definite diagnosis, but the fact that the film is missing makes the attempt at diagnosis more difficult.

With the evidence at hand we turn then to the problem of differential diagnosis. In the first place it is not asthma, though in the very beginning one might naturally have thought of the diagnosis of bronchial asthma. Tuberculosis is ruled out by the history, the sputum examinations, the x-ray, etc. Chronic suppuration in the nature of a bronchiectasis was definitely considered and ruled out, I believe, by the lipiodol examination, yet the description of the x-ray films taken after the injection of lipiodol is a little guarded as to the right lower lobe and it is possible that there may have been obstruction in the bronchus to this lobe which prevented the filling of bronchiectatic cavities. One would like to have all the information possible about the right lower lobe, because a definite disease in this region might possibly have reached the diaphragm and would explain the pain in the right shoulder. Bronchiectasis of a typical character, however, is certainly not present in this case. It is true, however, that we have recently noticed two or three cases in the hospital which were shown by operation or lipiodol to be bronchiectasis in a small area with hemoptysis as the principal symptom. I have never seen a case of bronchiectasis without hemorrhage and with the coughing up of large amounts of white sputum as in the case under consideration.

Lung abscess is ruled out. The story is not at all characteristic of such an infection.

There are, of course, other types of infection —namely, yeast, actinomycosis, etc., but there is no evidence which suggests such infection.

This leaves tumor or malignancy of some sort to consider seriously. We have no evidence of primary tumor of the bronchus. We have no x-ray or physical signs of malignancy in the lung itself. There is no history or other evidence of substernal thyroid or diaphragmatic hernia, but the only evidence which we have of any such growth is the x-ray report of markedly increased hilus shadows.

I do not believe that a cardiac condition by itself is sufficient to explain a dyspnea of the type here described, but one must, of course, think of the possibility of a cardiac diagnosis.

The epigastric symptoms that occurred toward the end are of interest. There was apparently marked distress immediately after meals with vomiting. If these symptoms had occurred earlier, I have no doubt that an x-ray would have been taken of the gastro-intestinal tract. There is a possibility, of course, of malignancy of the stomach with metastasis to the chest. There might also have been some evidence of other abnormal pathology pressing on the diaphragm.

I cannot make a clean cut diagnosis with the information at hand. If we had the chest x-ray I might venture a more definite opinion. So far as I can see we are dealing with some sort of growth pressing on the bronchial tree. Whether this is a malignant process or enlarged mediastinal glands I do not know. If forced to make a diagnosis, I should say malignant disease pressing on the bronchi from outside.

DR. MALLORY: I think nearly everyone here has seen this case.

Have you anything to add, Dr. Lord?

DR. FREDERICK T. LORD: No; we committed ourselves as unable to make a diagnosis.

CLINICAL DIAGNOSES (FROM HOSPITAL RECORD)

Chronic pulmonary infection.

ANATOMIC DIAGNOSES

Chronic pneumonitis of unknown etiology.
Pulmonary fibrosis.
Pulmonary emphysema.
Sclerosis of the pulmonary arteries.
Cardiac hypertrophy, right.
Hydrothorax, bilateral.
Ascites.

PATHOLOGIC DISCUSSION

DR. MALLORY: I think both Dr. King and Dr. Lord were very wise, because I cannot make a diagnosis either.

The lungs in this case were at least somewhat reminiscent of those in the last one. There was a very diffuse process involving all lobes of both lungs with multiple small areas of hardening. It did not in distribution or character remotely suggest tuberculosis. The pulmonary artery showed a marked degree of sclerosis, not so much as in the last case, nevertheless very marked; and there was a cor pulmonale with a marked hypertrophy of the right side of the heart, again not quite so marked as in the last case.

Histologically the sections of the lung are very surprising, because they show scattered throughout the parenchyma, sometimes in the bronchioles, more often apparently in the walls of the alveoli, collections of foreign body giant cells that at first glance look very much like tuberculosis, but in no single area in several dozen sections was there any caseation at any point and for the most part the giant cells suggested foreign body giant cells rather than tuberculous ones. It has not been possible to demonstrate any tubercle bacilli, as it was not in life.

I think we can certainly rule out actinomycosis, yeasts and any of the ordinary infections, which usually show organisms if a sufficient number of sections are examined.

I can hardly imagine an acutely progressive tuberculosis that would not produce very definite caseation in at least some of the lesions, and while I still think that the disease is probably an infectious one and that the scarring of the lung and sclerosis of the pulmonary arteries are secondary to the primary lung process, I cannot give it a name.

DR. WILLIAM B. ROBBINS: Do you think it could have any relation to the fibrosis that comes or that is said to come after influenza? It is not progressive as a rule.

DR. MALLORY: It seemed to progress fairly steadily from four or five years before death, when she first had symptoms.

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ILLNESS INSURANCE

A GREAT deal of attention has been given to methods designed to provide more or less financial relief in cases of illness, by physicians and sociologists. This subject is dealt with in the paper by Michael M. Davis, Ph.D., which appears in condensed form on page 494 of this issue, and sets forth conditions existing, and under consideration in this country.

This paper was delivered before a recent conference under the auspices of the College of Physicians of Philadelphia, and the American Academy of Political and Social Science.

The main theme in Mr. Davis's paper is "Sickness Insurance" and evidence submitted indicates widespread interest in this subject, and the facts and arguments presented by the author ought to broaden and intensify this interest in the efforts now under way to develop methods of insurance which will assist in promoting the desired relief, especially among the low income groups.

The time seems to have gone by when there was little more than curiosity in the minds of the physicians of this country respecting health insurance, because this live topic now has its ardent exponents and its bitter enemies.

It is on trial in several forms in many localities. In New England, the subject of insurance as applied to illness has been discussed at hospital, medical society and other meetings, and a few attempts are under way to meet local conditions. The most carefully worked out plans in this vicinity are those by Dr. Frederic A. Washburn, formerly Director of the Massachusetts General Hospital. Although much interest was aroused by his proposals, definite action was postponed.

In many places and under different organizations, experiments are under way which are designed to meet some phases of insurance, but physicians are divided in their approval of any one plan.

Outside of the medical profession, foundations and other organizations are studying the problems from all angles and sufficient interest has been shown to indicate that, if the medical profession does not work in cooperation with lay interests, the history of Health Insurance in other countries may be repeated in the United States.

In New England there has been very little evidence of constructive action on a large scale, which may be due to a waiting attitude based, very likely, on the desire to let other sections take the lead in experimentation.

Unfortunately the problems are too large, and the need for action too pressing to permit of indefinite postponement.

With the general adoption of health insurance abroad and the growing endorsement of some forms in this country, it seems certain that a more general acceptance of the principle is in the offing for this country. The longer we stand aloof, the greater is the likelihood of our being forced to accept plans which may not be conservative.

Further study under the direction of our state medical societies seems to us an important step. In order to know what is going on, a careful study of Mr. Davis's paper is in order.

THE BOSTON MEDICAL LIBRARY

IN times of depression libraries are put under heavy burdens. On page 492 will be found a very extraordinary report, that of the Boston Medical Library. Supposedly due to increasing time available for study by the members, the daily use of the Library has increased considerably this year. Owing to its smaller returns from investments the staff has had to be reduced in numbers and those that remain have

accepted reduction of their salaries. In spite of this all requests for service have been promptly met, showing the devotion of the staff.

There is hardly a better collection of periodicals or books in the country than may be found in this library and they are always available, not only for members, but for the public.

The Library is in great need of a larger income. It does not want to enter on any "drive" for funds now and does not propose to do so. It intends to meet the situation by giving better and better service.

The membership is made up almost entirely of physicians who reside in or about Boston. For many years the Library has had a small non-resident membership list. These members pay only nominal dues. At this time a large increase in the numbers of such members would help the Library both financially and in the broadening of its service. Out of town members who cannot make frequent trips to Boston may have references looked up by the staff and any volumes, both books and periodicals, sent to them by mail. If a volume is desired that is not available in the Library but is available elsewhere in the United States, the Library can secure it for a member.

Any communications regarding membership should be sent to Dr. Charles H. Lawrence, Boston Medical Library, 8 The Fenway, Boston, Mass.

THIS WEEK'S ISSUE

CONTAINS articles by the following named authors:

KIEFER, EVERETT D. A.B., M.D. Harvard University Medical School 1926. Physician, Department of Gastro-Enterology, Lahey Clinic, Boston. Associate Member, American Gastro-Enterological Association. His subject is "The Diagnosis of Chronic Ulcerative Colitis." Page 468. Address: 605 Commonwealth Avenue, Boston.

BROWN, MADELAINE R. A.B., M.A., M.D. Johns Hopkins University School of Medicine 1927. Research Fellow in Neuropathology, Harvard Medical School. Assistant in Neurology, Tufts College Medical School. Her subject is "The Pathology of the Gastro-Intestinal Tract in Pernicious Anemia and Subacute Combined Degeneration of the Spinal Cord." Page 473. Address: 412 Beacon Street, Boston.

JORDAN, SARA M. A.B., Ph.D., M.D. Tufts College Medical School 1921. Member of Staff of New England Deaconess Hospital and New England Baptist Hospital. Her subject is "Medical Treatment of Gastro-Jejunal Ulcer." Page 477. Address: 605 Commonwealth Avenue, Boston.

ULIN, ROBERT. B.S., M.D. Harvard University Medical School 1928. Assistant Orthopedic Surgeon to Outpatient Department, Beth Israel Hospital. Assistant Surgeon to Fracture Outpatient Department, Boston City Hospital. Teaching Fellow in Orthopedic Surgery, Tufts College Medical School. His subject is "Unusual Etiology of 'Fender Fracture'." Page 480. Address: 485 Commonwealth Avenue, Boston.

STILES, PERCY G. S.B., Ph.D. Assistant Professor of Physiology, Harvard University. Assistant Editor, Biological Abstracts. His subject is "Recent Progress in Physiology." Page 482. Address: Harvard Medical School, Boston.

MASSACHUSETTS LEGISLATIVE NOTES

H. 1198, a petition of Arsene J. Pare, is an act creating a Board of Examination and Registration to regulate the practice of Magnetic Healers. This bill is similar to others which have been submitted from time to time with the hope of securing endorsement of a particular cult.

The hearing will be held before the Committee on State Administration on Wednesday, March 7, at 10:00 A.M., in Room 422, State House, Boston.

MISCELLANY

BOSTON MEDICAL LIBRARY REPORT IN ABSTRACT

The annual meeting of the Boston Medical Library was held in Sprague Hall on Tuesday, January 16, 1934. The following officers and committees were elected for the ensuing year:

President: Dr. Lincoln Davis.

Vice-Presidents: Dr. Homer Gage, Dr. Daniel F. Jones, Dr. George G. Sears.

Secretary: Dr. Horace Binney.

Treasurer: Dr. Richard G. Wadsworth.

Librarian: Dr. Charles F. Painter.

Executive Committee: Dr. Herrman L. Blumgart, Dr. James L. Gamble, Dr. William C. Quinby, Dr. Francis M. Rackemann, Dr. Henry R. Viets.

Committee on Medical and Social Meetings: Dr. Henry T. Hutchins, Chairman; Dr. Francis T. Hunter, Dr. Gilbert Horrax, Dr. Francis Newton, Dr. James M. Faulkner.

Committee on Membership and Elections: Dr. Charles H. Lawrence, Chairman; Dr. Richard B. King, Dr. William B. Castle.

Reports of the Librarian, Treasurer and Executive Committee were read and approved. A condensed report of the Treasurer follows:

Receipts			Expenditures		
Dividends, Interest, etc.		$16,198.85	Books:		
Dues		10,175.25	From Income	$ 4,676.78	
Share of Maintenance		5,283.00	From Capital	13,050.00	
Miscellaneous:					$17,726.78
Books and Bibliography	$ 160.21		Binding		2,194.75
Salaries for special cataloging	191.68		Care of Rooms		1,119.80
Meetings Committee			Completion of Files		601.11
Balance from 1932	198.96		General Expense		1,559.53
Sale of Classification Pamphlets	18.00		Discount		106.55
Fines	31.59		General Expense, Library Committee		186.86
Special gift for repairs	257.00		Insurance		134.42
United Building and Endowment Fund for equipment in new stacks	420.17		Interest on Notes		1,111.64
			Light, Heat and Water		1,452.01
			Meetings Committee		119.48
			New Building		571.09
From sale of securities for books for Bullard and Hyams collections	13,050.00		Periodicals		4,165.56
			Repairs and Renewals		1,163.93
			Salaries		12,287.37
For investment— Counsel Fee	750.00		Stationery, Printing and Postage		512.42
			Transportation		320.98
		15,077.61	Counsel Fee		749.99
			Excess of Income		650.44
		$46,734.71			$46,734.71

Income from investments has been nearly $5500 less than in 1932. Dues have been $75 less. On June 1, 1933, a 10 per cent reduction in salaries was put into effect and by not filling one vacancy in the staff, a saving of $2293.13 was effected. Repairs and equipment have been $500 more. Other items of maintenance expense have been practically the same as last year, resulting in a total saving of $2081.81. The expenditure for books last year was about $15,000, this year it was $17,726.78. Before the receipt of the Bullard and Hyams bequests two years ago, the expenditure for books was about $7000 a year. The terms of these bequests require the purchase, as opportunity occurs, of incunabula, and books on Hebrew medicine, out of the income and also up to one-half of the capital value of these funds. Many exceptional opportunities having occurred this year to acquire very valuable books and manuscripts at favorable prices, securities were sold to the amount of $13,050 in compliance with the terms of the above bequests, and $4,676.78 was expended from income.

In brief, these reports show that the Library while suffering severely like other institutions from the widespread financial depression has been able to carry on its important functions without very serious curtailment during the past year. The attendance at the Library during 1933, although it was found necessary for reasons of economy to give up evening sessions, increased nearly 1000 to 11,624. Likewise, the circulation and use of books increased over 2000 to 31,937. Some 2500 volumes and 2000 pamphlets were added to the Library during the year, bringing the total number of volumes to 165,841 and pamphlets to 111,745. Seven hundred and twenty-eight volumes were bound and over 12,000 cards written. Because of the great congestion owing to lack of stack room, only new books and periodicals, manuscripts and incunabula were cataloged. During the year, the reference librarian checked or compiled 57 bibliographies and abstracted 59 articles. Seven translations from incunabula were made for members. Inter-library loans were made with 92 other institutions. Four hundred and ninety-one periodicals were subscribed for and 435 were received as donations. The recent fall of the dollar in foreign exchange has added proportionately to the cost of foreign periodicals, which have always been a heavy expense. The Director of the Library has been able to make an arrangement with foreign publishers, whereby this added expense has been partially reduced. An arrangement has also been made with other libraries, eliminating duplication of the more expensive special periodicals.

During the year, a temporary stack of portable wooden boxes was installed on the reading room floor of the new wing. These boxes permit of easy moving of books and satisfactory cataloging, and 18,000 volumes have been cared for in this manner. This has greatly relieved the congestion on the floor of the new wing but until a permanent stack of steel can be built, a considerable number of books will still have to remain in storage.

In contrast to the curtailment and rigid economy

enforced by the financial situation in all other departments of the Library, there has been a notable accession of early manuscripts, incunabula and rare books purchased from funds restricted to that purpose, notably the Bullard and Hyams Funds.

The financial situation in Europe has offered favorable opportunities of which the Library has been able to take advantage. Some eighty incunabula and twenty early manuscripts have been added during the past year. There have been notable additions also in the field of Americana, a number of physicians' account books of the eighteenth century having been acquired. The historical collection of the Library is becoming well known throughout the country and its riches are attracting scholars in many fields of knowledge. Two exhibitions of some of the old and rare medical books have been held in connection with medical meetings in Boston.

During the year, sixty-one meetings have been held in the Library by twenty-one organizations or societies with a total attendance of 4088. It has been suggested that some plan be devised for coördinating the many medical meetings in Greater Boston and that the Library might well act as a central agent in this movement. Tentative steps in this direction are being undertaken.

Many kind friends of the Library have during the year donated books, periodicals, medals, bronzes and photographs, much appreciated additions to the growing collection. They are too numerous to be properly acknowledged here.

There has been a loss in membership of thirty-nine during the year. The Library is now supported by a total membership of all classes of 866. It seems imperative to the Executive Committee that some means of increasing this basis of local support by extending the usefulness of the institution to a wider section of the profession be sought for.

The exquisitely furnished Prince Memorial Room given in memory of Dr. Morton Prince has been greatly appreciated by users of the Library. Many members, however, are seemingly unaware of this retired and charming retreat for reading and study.

The Staff of the Library has accepted a substantial reduction in salaries during the past year with a spirit of cheerful coöperation, and has continued to give the expert and cheerful service which has characterized it in the past.

The needs of the Library are very great and pressing. Owing to the shrinkage of income from invested funds as a result of the depression, and to the fall of the dollar in foreign exchange the Library has suffered severely. A larger membership and a substantially larger endowment is required to keep up the files of foreign journals and periodicals which have been subscribed for in the past and which otherwise will have to be further curtailed. The new wing still lacks its stack, the periodical room adjoining Holmes Hall is unfinished, a few hundred dollars would make it habitable. The supper room lacks the cheer which suitable furnishings might give it. The books, however, are there still available to all, and without books, how else shall the record of knowledge be preserved?

CHANGE COMES TO THE DOCTOR

By Michael M. Davis, Ph.D.*

(An address [condensed] delivered before the "Conference on the Medical Profession and the Public," held under the joint auspices of the College of Physicians of Philadelphia and the American Academy of Political and Social Science at Philadelphia, February 7, 1934.)

"Because," wrote Franklin D. Roosevelt in 1932, when he was Governor of New York State, "large groups of the population seem unable to provide themselves with adequate medical services, the problem was of major importance five years ago. It is of vastly more importance now, because of the change in the economic situation."

In the past fifteen months, since the Committee on the Costs of Medical Care disbanded, county medical societies and other bodies of physicians have taken up the idea of sickness insurance. In California, the state medical society issued early in 1933 a pamphlet which not only endorsed the general principle of insurance in its applications to sickness, but proposed a plan whereby the county medical societies of the state were to offer medical care to the people of their localities in return for a stated annual payment. The actual development of the plans was left to the local societies, some of which, notably in Los Angeles, have effected an organization and offered such services. The subject has become of such wide interest in California that the state legislature, just before its adjournment in the autumn of 1933, created a commission to investigate health insurance and report to the legislature of 1935.

In the states of Washington and Oregon the medical societies have passed to a more advanced stage. Thus in Seattle, Tacoma, Yakima, Portland and in smaller places in both states, the county medical societies have organized "service bureaus" which are already furnishing services to substantial numbers of people in these cities under annual payment agreements, the insurance principle. Each subscriber pays so much per year, and his doctor's and hospital bills are paid for him, whether he has much or little sickness. In Seattle, the King County Medical Service Bureau offers the services of more than three hundred doctors to groups of employed persons. Although the plan was instituted during the late summer of 1933, more than eight thousand subscribers had been enrolled by the end of the year. In Portland, one hundred and seventy doctors participate in the plan.

Experimental precedents had been set for these county medical society projects by a number of small

*Director for Medical Services, Julius Rosenwald Fund, Chicago, Illinois.

groups of doctors, mostly in towns of the mid-West, a few in the East, which, having associated themselves with one another and with the facilities of clinics and hospitals, furnish service to patients in their localities for a regular payment per year.

These plans are experiments. They have the defects of newness and the possibility of commercialization. But they are the considered attempts of medical men to find solutions for economic and professional problems in their localities. The medical society of New Jersey expressed the constructive attitude underlying such experiments when they resolved, at their annual meeting last June, that "we physicians pass on at once from academic discussion to prompt and concerted action," and when they directed the organization of health service committees in each county society, for the purpose of "providing by existing health agencies adequate medical care for all people in each county at costs within their means".*

During 1933, the writer had occasion to meet with representatives of medical societies in four cities of the middle West and South, to discuss sickness insurance plans which committees had drawn up in tentative form. The state medical society of Michigan carried through at its own expense and published last autumn a careful study of the costs and needs of medical care in this state, and of the economic condition of its people and its physicians. After adopting a progressive report, the society authorized its committee to prepare practical plans for establishing demonstrations of sickness insurance in Michigan communities and has recently, in coöperation with the American College of Dentists, sent two representatives to England to secure a first-hand report of British sickness insurance. A committee of the American College of Surgeons, at its convention last October, proposed an extensive plan of medical service to industrial workers, and its program is being followed up by a representative committee of this influential professional body.

The Committee on the Costs of Medical Care rendered its final report in December, 1932, but most of its studies were made during the years 1928-30, thus displaying conditions and problems which, as Mr. Roosevelt's words imply, were not created but have merely been emphasized by the economic changes of the last few years.

The Committee split when it came to shaping plans for practical application. The majority recommended a fuller planning and organization of medical practice, and an extensive use of the principle of insurance as a means for distributing the uneven and unpredictable costs of medical care so that they would not fall with crushing weight upon some of the people every year. The minority reports differed in degree rather than in principle. But the *Journal of the American Medical Association*, in an editorial appearing in December, 1932, just after the Committee had disbanded, attacked the majority report as a plan which would turn doctors into "drelings and treat sick people like robots, despite the fact that in addition to nearly all the economists, public health officials and other non-medical members of the Committee, sixteen physicians had signed this report, including a recent president of the American Medical Association, a member of President Hoover's cabinet. The editorial denounced the plan as "socialism and communism—inciting to revolution," contrasting "on the other side the organized medical profession of this country urging an orderly evolution guided by controlled experimentation."

The chief minority report, which the American Medical Association endorsed, had strongly recommended that county medical societies experiment with plans for medical care on an insurance basis. The editorial failed to comment on this constructive recommendation of the minority, and instead endorsed sickness insurance by commercial companies, although, curiously enough, both the minority and the majority reports had united in condemning this.

One would naturally assume that forward movements of county medical societies and other local bodies of physicians would have been led and coördinated by their national organization, particularly as this association had endorsed the minority report which recommended just such professional initiatives. But what are the observed actions, as contrasted with the logic of words? Plan after plan proposed by local groups of physicians or by county medical societies for establishing some organized service or for utilizing the insurance principle to help people pay the costs of sickness has been checked or stifled, usually less by open attack from national headquarters than by fomenting opposition to it from certain elements in the local professional circle. In Milwaukee, a committee of the county medical society had during 1932 developed a scheme of sickness insurance to be offered to the people of their community even more comprehensive than the plans now in operation on the Pacific coast. This plan began to attract more than local attention, but as soon as it became apparent that such a plan might be translated from paper into operation in Milwaukee, influence was exerted from the larger city eighty miles away, the plan suffered a series of adroit postponements, and it now lies in limbo in a committee, which apparently cannot dismiss it because of a real local interest and apparently will not report it out because of external pressure.

Nashville was one of the cities in which I had the privilege of discussing with the county medical society a similar plan which a committee had prepared. Six months later, one of the leading physicians of the city told me that it had been decided not to try to push the plan further because of requests from one of the officials of the American Medical Association. Efforts of the same kind were made to

*Journal of the Medical Society of New Jersey, September, 1933, p. 28.

dissuade the American Hospital Association from endorsing group hospitalization as a means of helping the average man pay his hospital bills. When this proved futile and when these hospital plans began to extend into more and more communities, a series of publications from the Bureau of Medical Economics of the American Medical Association appeared, describing hospital insurance plans, mostly those of a commercial or obviously faulty nature. Where these reports deal with sound and reputably organized schemes, they confine themselves chiefly to dangers and defects, presumably with the intent of discouraging any action. One scans these publications in vain for encouragement of that "controlled experimentation" to which the Association's editorial had referred as the method of evolutionary progress. By adroit phrasing, if not by direct statement—as when a recent editorial* refers to "all sorts of hospital insurance schemes" as "mechanizations of medical practice" — the road to experimentation is always fronted with a danger signal. It is never set with a green light.

The extensive development of health insurance abroad has been made known but little to American physicians through their national journal and has been presented invariably in an unfavorable aspect. In 1912, when the law went into effect, it was strongly opposed by the British Medical Association. In 1921, when there had been nine years' experience with the law, the secretary of the Association wrote† that "not one doctor in a thousand who is doing national health work would willingly go back to the old system". In 1925, the Association endorsed the insurance system in an official memorandum to a Royal Commission. In 1933, the Association joined with other British agencies in formal felicitation of Mr. David Lloyd George, on the occasion of the twenty-first anniversary of the law which he had sponsored. The anonymous British correspondent who writes in the *Journal of the American Medical Association* gives currently the impression that the health insurance law of his country is regarded by responsible British physicians as fundamentally undesirable and defective. Officials of the British Medical Association have called attention to the errors and false color of this correspondent's reports.

In the November *Bulletin of the American Medical Association* there was published the larger part of an address made last summer‡ by Sir Henry Brackenbury, an English physician high in the councils of the British Medical Association. The portions reproduced contain criticisms of British Health Insurance made by Dr. Brackenbury and his proposals for improvement, but do not include the opening paragraphs of his speech in which he stated explicitly the fundamental general approval which he and the British Medical Association give to this law. The entire effect of his address is altered by this omission and by the italics and comments which the editors of this Bulletin insert.

Another professional body has adopted a very different attitude in this case regarding the limited but keenly felt issues of hospital service. Hospital care is necessarily expensive, and its heavy and unpredictable costs upset seriously even the middle-class budget, not to speak of the wage-earner's. Although only about one person in fifteen goes to a hospital annually, hospitalized illnesses cost half of what the families of the United States spend for sickness. In February, 1933, the American Hospital Association approved the principle of insurance against the costs of hospital care, and recommended a plan called "Group Hospitalization," under which organized bodies of people, such as the employees of one or more industries, the members of clubs or other bodies, would each pay a small sum per year and in return have their hospital expenses paid when they needed hospital care.

A few hospitals in the middle West had experimented with such plans before 1933. In the spring of that year the Medical Society of the State of New York endorsed the principle of group hospitalization, the establishment of plans in that state having to wait the passage of an amendment to the insurance law which a responsible group of persons have drafted with the coöperation of the officials of the state insurance department. The Cleveland Academy of Medicine has given its official approval in resolutions recently published, to the group hospitalization plan just launched by the Cleveland Hospital Council. By the end of 1933, partly as a result of the literature and advice distributed by the American Hospital Association, but still more because of widespread local need and demands, plans in twenty-five cities, affecting more than one hundred hospitals, were in effect, with the coöperation of the local profession, and they are under discussion or in process of organization in some fifty additional communities.

All of the plans and experiments referred to in this paper involve not only the physicians and other agents furnishing medical care, but also the people receiving it. Projects for medical care must always involve both of these groups. Upon this principle rests the initiative which has been taken by consumers of medical service, such as industries, organized groups of employees, welfare agencies and philanthropic foundations. Some especial attention has been called to the activities of foundations in this field. Eight foundations coöperated in supporting the Committee on the Costs of Medical Care as a research body. Several of these foundations are interested in experimentation as well as investigation.

In the spring of 1933 the Milbank Memorial Fund announced that it would undertake a systematic and

Journal of the American Medical Association, January 27, 1934, p. 295.

†*Journal of the American Medical Association*, May 21, 1921, p. 1402.

‡The address was delivered before the Royal Sanitary Institute, and was published in this Institute's *Journal*, August, 1933; also published in the Supplement to the *British Medical Journal*, July 15, 1933.

careful study of the best method of organizing sickness insurance in a typical American state. The Twentieth Century Fund declared its intention of establishing a department to assist in the organization of sickness insurance plans in which organized bodies of physicians were coöperating with groups of consumers. The Julius Rosenwald Fund has made studies and disseminated information concerning medical economics, furnished advice regarding practical projects, and coöperated with the American Hospital Association in promoting group hospitalization.

These foundations have been attacked by the editor of the *Journal of the American Medical Association* on the ground that they, as lay organizations, are "interfering" with medical practice, and that they are adopting policies concerning medical services without professional advice and guidance. I do not think these agencies require apology or defense, and I do not speak for them officially in these remarks. It seems, however, appropriate to remark that the millions of people, "lay" people, who receive medical care, upon their own bodies, and who pay for it, out of their own pockets, have the right — and indeed the power — to say something about the conditions under which care shall be received and paid for. Likewise, a "lay" organization, established for public service, has the right, and indeed the obligation, to gather facts, express opinions, formulate policies, initiate and support experiments. When thus proceeding in matters affecting medical service, such organizations of course need professional advice and guidance, and from my knowledge of these agencies, they make a point of securing it. They find it necessary, however, to seek advice from physicians who have a constructive and not a negative attitude toward change in medical practice. There is a large and increasing number of such men, physicians who do their own thinking and who are in sympathy with the policy enunciated by President Roosevelt in one of his addresses last year: "The country needs and, unless I mistake its temper, the country demands bold, persistent experimentation. It is common sense to take a method and try it; if it fails, admit it frankly and try another. But above all, try something!"

As one sums up the developments of the last few years, one is led to contrast the reactionary expressions of some professional bodies with what thousands of physicians and hundreds of medical organizations throughout the country are now doing. Actions are more conclusive than words, and it is a most significant and encouraging fact that the organized actions of physicians during the past few years through medical societies, hospital staffs and clinic groups represent a larger measure of professional initiative and participation in sickness insurance and other organized projects than appeared in any European country during the period when these undertakings were in their formative stage. The movements abroad were almost exclusively initiated from industrial sources.

A national medical official has remarked on several occasions, "This agitation about the costs of medical care will all die down if we just keep things quiet for a while." This expression of an ostrich philosophy is more pathetic than important. The public, in its search for health at a price it can pay, will have to deal with the situation in the future without much hesitation about ostriches; which is just what the physicians and medical societies have been doing in the practical experiments described in this article. In these endeavors both physicians and the public have a need for uncooked facts and for more than a negative leadership from the professional organizations.

Americans do not want, and nobody ought to have, a cheap or impersonal doctor. Nobody questions that the physician is the authority about caring for the sick; but as to the system under which medical care is to be organized and paid for, the people who are the ultimate consumers and who meet the bills of the service must have more than a little to say. The American people are likely to be impatient of those who do nothing to aid experimentation, and have nothing themselves to propose except the philosophy of keeping things as they are. The public has a right to demand, and I believe the intelligent American consumer does demand, at least these five elements in the care and protection of his health:

1. He wants medical service not as a charity, but paid for on a basis consistent with the self-respect of American citizens.

2. He wants a medical service which is so organized as to furnish him with continuous contact with a personally interested physician and which does not confuse and subdivide him among a number of independent competing specialists.

3. He wants a system of paying for medical service which will develop the maximum paying power from his income, and remove the hazard of unexpected sickness bills occurring at the time when his paying power is usually least.

4. He wants a system of payment which will stimulate the prevention rather than the care of sickness.

5. He wants good hospitals which are available to him geographically and financially.

These demands of the consumer of medical service are consistent with what the physician also desires and I believe the American public is sympathetic with and will support the demands of physicians and other professional workers for adequate and stable compensation, for the maintenance of high professional standards and for opportunity to keep abreast of advances in the science and art of medicine. In the pursuit of these aims, the public and the professions have a joint interest at stake. Neither can secure what it wants without the coöperation of the other.

COMPARISON OF DISEASE INCIDENCE IN CONNECTICUT WITH 1933 AND SEVEN YEAR AVERAGE

MONTH ENDING FEBRUARY 3, 1934

	1934					1933			
Diseases	Week ending Jan. 13	Week ending Jan. 20	Week ending Jan. 27	Week ending Feb. 3	Average cases reported for week corresponding to Feb. 3 for past seven years	Week ending Jan. 14	Week ending Jan. 21	Week ending Jan. 28	Week ending Feb. 4
Cerebrospinal Men.	—	—	1	1	2	—	—	—	1
Chicken Pox	260	114	152	82	116	132	156	146	117
Conjunctivitis Inf.	3	—	34	1	—	—	—	—	—
Diphtheria	7	5	6	3	23	5	1	6	11
Dysentery Amebic	1	—	—	—	—	—	—	—	—
Encephalitis Epid.	—	2	—	—	—	—	—	—	1
German Measles	2	—	4	2	14	1	—	1	6
Influenza	12	12	40	4	154	471	249	270	210
Malaria	—	—	—	—	—	—	—	—	1
Measles	10	17	14	34	186	100	109	67	157
Mumps	203	132	132	97	63	43	53	56	57
Pneumonia (Broncho)	52	38	39	29	53	69	98	76	95
Pneumonia (Lobar)	48	57	45	38	59	57	108	84	72
Poliomyelitis	—	—	1	—	—	—	—	—	—
Scarlet Fever	62	71	53	68	91	114	108	117	149
Septic Sore Throat	5	2	2	2	2	—	—	2	—
Smallpox	—	—	—	—	2	1	—	2	4
Trichinosis	—	1	—	1	—	—	—	—	—
Tuberculosis (Pul.)	18	24	23	32	22	24	24	29	24
Tuberculosis (O. F.)	—	4	3	3	3	—	2	1	1
Typhoid Fever	—	—	1	—	—	1	1	1	1
Undulant Fever	1	1	—	1	—	—	2	1	1
Whooping Cough	47	64	45	36	73	93	72	58	69
Gonorrhea	24	31	35	22	46	50	51	42	34
Syphilis	32	29	55	38	40	78	45	28	83

Remarks: No cases of Asiatic cholera, glanders, plague, or yellow fever during the past seven years.

COMMONWEALTH FUND FELLOWSHIPS

The Commonwealth Fund of New York City is again offering to Fellows of the Massachusetts Medical Society a number of fellowships for postgraduate study at the Harvard Medical School during the calendar year 1934. A candidate for one of these fellowships must be a graduate of a Grade A medical school and must have been in general practice at least five years. The age limits are thirty to fifty years, and residence must be in a Massachusetts town of under ten thousand population.

The fellowships may be for one, two, three or four months. The stipend is two hundred and fifty dollars per month plus tuition and traveling expenses from place of residence to Boston and return.

The subjects offered are medicine, obstetrics and pediatrics. All candidates for a fellowship are required to take at least one month of medicine; this course is given at the Peter Bent Brigham Hospital, the Boston City Hospital or the Massachusetts General Hospital, from March to December. If more than one month is desired, a second month of medicine may be elected, or a selection may be made from the other two subjects.

The course in pediatrics is given at the Children's Hospital. Fellows who take this course are required to live at the hospital; this is a distinct advantage as it is possible to see emergency cases and follow the actual treatment of patients at all times. Not more than two physicians may take this course at one time. It is given throughout the year.

Obstetrics is taught at the Boston Lying-In Hospital. Fellows who take this course are required to live at the hospital. Not more than two may take this course at one time. It is given throughout the year.

It is probable that an additional course in office surgery will be offered later in 1934. As soon as such a course is available, details will be announced.

The above subjects are part of the regular curriculum in the Courses for Graduates at the Harvard Medical School; these courses are open to all doctors who are graduates of Grade A medical schools. Instruction is given six days per week; the work consists of clinical case study with the guidance of the faculty in the Courses for Graduates. All essential laboratory procedures are taught; normal and pathological anatomy will be demonstrated as needed in the course of instruction.

Application blanks may be secured from the Commonwealth Fund, 41 East 57th Street, New York City, or from the Courses for Graduates, Harvard Medical School. Doctors who are interested may secure further information by addressing the Assistant Dean, Harvard Medical School, Courses for Graduates, Boston, or by telephoning Longwood 2380.

SURGICAL DISEASES IN TURKEY, SYRIA, AND PALESTINE

An interesting talk on "Surgery in Turkey, Syria, and Palestine" was given on Friday, February 16, in Building D of the Harvard Medical School, by Dr. Edwin St. John Ward, former dean of the Bierut Medical School in Bierut, Syria. The talk was sponsored by the Phillips Brooks House Association.

Surgery in the Near East is of particular interest because of the contacts one makes with surgeons from different countries. Although surgery is fundamentally the same everywhere, one finds that different aspects are emphasized by the different groups. The American school is characterized by the emphasis it places on nursing care, the development of hospital organization, and the training of assistants. Most of the men are missionaries and a high moral and ethical standard is maintained.

The peculiar features of surgery in the Near East were discussed in very interesting fashion. Liver abscess, amebic, is not an uncommon condition. Most of the cases are solitary, but many have proved to have two or more abscesses in the liver. Dr. Ward cited the case of a boy with an infected hydatid cyst of the liver, a condition to be distinguished from amebic liver abscess. The treatment for simple liver abscess is aspiration and emetine hypodermically. Many cases become secondarily infected, however, when incision and drainage is indicated. A case was described in which the liver abscess had ruptured into the thorax and was discharging through the bronchial tree. Vigorous treatment was followed by cure in about two months.

Malignant disease is no less common in the Near East than it is in Europe or America. The statistics are probably not very reliable because comparatively fewer people live to cancer age, diagnosis is often not accurate, and autopsies are not common. Sarcoma is somewhat more prevalent than carcinoma. Lymphosarcomata of very bizarre types are encountered, but carcinoma of the breast has the same characteristics as in this country.

Dr. Ward gave reasons for the great prevalence of urinary calculi in the Near East. The warm climate associated with perspiration leads to a concentrated urine. Water seepage is through porous geological formations and consequently has a remarkably high mineral content. The inhabitants are very fond of water from their wells and fountains and the type of calculi varies with different localities, according to the composition of the natural water in each. Whereas the above may be predisposing causes, the inciting cause as a rule is the presence of infection in the urinary tract.

Surgery in a fourth group of cases dealt with the removal of foreign bodies. The natives have an interesting belief in connection with gunshot wounds. The injured person is believed to die invariably if the bullet is allowed to remain in the wound. Attempts are therefore made to prevent operative procedures on wounded enemies. Dr. Ward described an ingenious method for the removal of soft foreign bodies from the esophagus. The stomach is filled with water (an instrument is passed carefully by the foreign body) and the vomiting which ensues creates sufficient pressure to dislodge the obstructing object. Emergency tracheotomies are not infrequent procedures especially in children.

In conclusion, Dr. Ward pointed out that the requirements of a surgeon are many and varied in such a country. Aseptic technique, ingenuity, courage, and caution are indispensable.

CORRESPONDENCE

A STATE SURVEY

February 18, 1934.

Editor, *New England Journal of Medicine.*

May I add my plea for a State Survey similar to that reported in the *A. M. A. Bulletin* for January, 1934. I believe that the care of the poor is a community responsibility, and that the doctor should be paid. I also believe that attendance at the Postgraduate Courses should be a requisite for continued Society membership.

Sincerely yours,
R. B. BRIGHAM.

210 Elm Street,
Northampton, Massachusetts.

RECENT DEATH

MERRILL—WILLIAM HOWE MERRILL, M.D., of 46 Albion Street, Lawrence, Mass., died at his home, February 18, 1934, after a short illness. Dr. Merrill was born in North Newport, Me., in 1864, and graduated from the Bowdoin Medical School in 1888. He engaged in postgraduate work at Johns Hopkins Medical School in the field of ophthalmology and otolaryngology.

He settled in Lawrence in 1896, and joined the Massachusetts Medical Society in that year. He was also a Fellow of the American Medical Association and the American College of Surgeons. He held memberships in the American Academy of Ophthalmology and Otolaryngology, the New England Ophthalmological Society and the New England Otological and Laryngological Society.

He was a past president of the Essex North District Medical Society and had served on the Board of Censors. For several years he was a member of the Council of the Parent Society. He was an active member of the Lawrence Medical Club.

He is survived by his widow, Mrs. Abbie Merrill; two sons, Dr. Urban H. Merrill and Ivan C. Merrill, both of Lawrence; and a sister, Laura F. Merrill of Bangor, Me.

NOTICES

BOSTON MEDICAL LIBRARY

Beginning March 5, 1934, and continuing until June 1, the Library will be open on Monday and Wednesday evenings until 10 P.M.

RADIO HEALTH MESSAGES

MARCH, 1934

Sponsorship: Public Education Committee of the Massachusetts Medical Society and Massachusetts Department of Public Health.

Courtesy WBZ. Fridays, 4:30 P.M.

March

2 Age and Cancer
9 Some Problems of Epilepsy
16 Fractures
23 How to Keep the Well Child Well
30 Résumé of the Year's Work

HEALTH QUESTION BOX

Sponsored by Massachusetts Department of Public Health. Fridays, 4:40 P.M.

RADIO HEALTH FORUM

Queries from the public are answered under the sponsorship of the Department of Public Health.

Courtesy WEEI. Fridays, 5:00 P.M.

Questions on Health and Prevention of Disease may be sent to: Radio Health Forum, State Department of Public Health, State House, Boston.

SPECIAL

From Friday, January 19, the State House Broadcasts were discontinued and in their place were substituted Ten Minute Health Reviews.

Sponsored by the Massachusetts Department of Public Health. Assisted by Miss Violette Babcock, Violinist, and Mr. G. Lambert Roscoe, Pianist and Organist.

Courtesy WEEI. Fridays, 1:15 P.M.

Glimpses into the History of Public Health in Massachusetts together with the Functions and Activities of the Massachusetts Department of Public Health, Blended with Classical Music.

After you have heard this program, we would appreciate your comments.

REPORTS AND NOTICES OF MEETINGS

HARVARD MEDICAL SOCIETY

The bi-monthly meeting of the Harvard Medical Society was held in the Peter Bent Brigham Hospital Amphitheatre on January 30, 1934. The meeting was opened by the presentation of cases by the House Staff.

A 44 year old white male painter with a progressive story of a heart lesion of ten years' duration was presented. Physical examination on admission showed an enlarged heart, enlargement of the liver, slight cyanosis, mild dyspnea and orthopnea, and prominent neck veins. There was a rough systolic and blowing diastolic murmur. The heart showed auricular flutter. On administration of digitalis this turned into fibrillation and finally became regular, with complete alleviation of symptoms. The diagnostic conclusion was mitral insufficiency with questionable stenosis.

The Surgical Service presented a 54 year old white female who was in the hospital, convalescent from a minor surgical procedure, when she had sudden onset of severe abdominal pain and tenderness associated with nausea and vomiting, suggestive of mesenteric thrombosis. At operation the terminal ileum, cecum, and ascending colon were congested and hemorrhagic and had to be resected. With anastomosis the patient had made a complete recovery. Pathological examination of the specimen showed thrombosis of the veins, with the arteries patent. Dr. Cheever thought the suddenness of the onset of symptoms was much more in favor of embolus than of thrombosis.

The first discourse of the evening was delivered by Dr. Reginald Fitz, whose subject was "The Advantages to the Harvard School of Public Health of a Distinguished Ancestry." He began by stating that his own personal interest in the school had been inspired by Sir George Baker of England through a paper which Baker had written in 1767. This paper was "An Inquiry into the Endemial Colic of Devonshire," and dealt with lead colic which occurred in people who drank cider expressed in lead-lined vats. These victims suffered from severe "dry bellyache" without diarrhea. The paper mentioned that Benjamin Franklin of Philadelphia knew of a somewhat similar occurrence in Boston, Mass. This led Dr. Fitz to inquire into the early history of lead colic in Boston.

An Englishman named John Clark came to America in 1628. He settled in Ipswich but later moved to Boston. He married Martha Saltonstall, and from this union there followed seven generations of physicians. The third John Clark graduated from

Harvard College in 1687. He was a brilliant and versatile man, soon becoming recognized as a good physician, a popular minister, and an able politician. He was elected to the State Assembly and became Speaker of the House. Through marriage he became the brother-in-law of Cotton Mather, a minister and reformer of renown. A close friendship developed between Mather, Clark, and Zabdiel Boylston, all apparently being interested in public health problems of the day, and frequently meeting in the evening for discussion of such problems.

During this brief genealogical prologue Dr. Fitz had set up a small, old table and placed on it a silver punch bowl, cups, candlesticks, and long church-warden pipes filled with tobacco. The bowl was filled with punch, the candles lighted, the room lights extinguished and almost unconsciously one found oneself at the Bear Tavern in Boston on the evening of January 30, 1723. The strains of soft music coming from a distant part of the inn ceased as Mather (Dr. Fulton), Clark (Dr. Gibson), and Boylston (Dr. Eppinger), all in colonial costume, came in and seated themselves at the table. It was mentioned that a young upstart by the name of Benjamin Franklin had begun an investigation into some strange symptoms which were occurring in people who were drinking rum made in Boston. Boylston thought the symptoms had a familiar sound. He produced a book which he had recently received from England entitled "Opera Omnia Medica et Physica," written by Bernardino Ramazzini. This contained a description of excruciating abdominal pain, suffered by men engaged in the potter trade, accompanied by constipation and later followed by wrist drop. Cotton Mather then suggested that there might be such a disease as lead poisoning. He thought the opportunity ideal to add reform to an obvious crusade for public health by preventing the manufacture of liquor in the then commonly-used lead lined stills, and suggested that Clark, the politician, take steps to make the necessary laws. After another round of punch Clark arose and, in words befitting his eminent position, dictated "an act" to Zabdiel Boylston. The "act" prohibited the manufacture of liquor in leaden materials under penalty of heavy fine. Furthermore it forbade craftsmen to continue to make such apparatus. This "act" was later passed, practically as originally read, by the Legislature of the Massachusetts Bay Colony.

The turning on of electric lights and the appearance of Dr. Fitz to remove the table brought the realization that one was not in the Bear Tavern on the evening of January 30, 1723.

The second paper of the evening was by Dr. Frederic T. Lewis, presenting an historical sketch of the beginnings of microscopy at Harvard University. He said that microscopes came late to Harvard, and first sketched what had already been accomplished in Europe. In Holland the microscope had been invented by the Jansens, not much later than 1590, according to Peter Borell's sifting of evidence. There Leeuwenhoek (1632-1723), with high powers, had completed his studies of bacteria and protozoa, muscle striations and circulating blood, before any microscopes were needed in Boston. In Italy, where the word *microscope* was coined, the first picture of objects seen with its aid had been published—Stelluti's bees of 1630,—Father Kircher had described several kinds of crude microscopes available in 1646, with which he saw, or thought he saw, "worms" in the blood of febrile patients. In Italy, also, the scholarly Malpighi (1628-1694), working with low powers, had laid the firm foundations of vegetable cytology, avian embryology, and the general histology of the major viscera, all this before microscopes were used at Harvard.

In the *Novum Organon* of 1620, Lord Bacon had introduced the microscope to English men of letters, suggesting its vast possibilities, but thinking that inability to examine more than tiny particles of any large object might limit its usefulness. Dr. Power, in 1664, in language suggestive of the *Religio Medici*, published the first book of microscopic observations in English. He described the organs of the bee, the fly, and the butterfly, and with Harvey had looked for "capillary vessels" in the louse. Kircher's finding of lice upon fleas he could not confirm, but it seemed probable and that was sufficient to inspire Jonathan Swift's immortal verse. In London the Royal Society had made microscopy fashionable. Among its original members were Robert Hooke, the first to describe and name vegetable and animal "*cell*," and John Winthrop, Jr., who came to Boston in 1631, bringing a telescope and many scientific books. This telescope, the first in these colonies so far as known, he later presented to Harvard College, but there is no record of any interest here in microscopy at that time.

In 1726 Thomas Hollis of London endowed Harvard with a chair of mathematics and experimental physics. This position was occupied by Greenwood from the year 1728 until his eviction because of drunkenness in 1738. He made no known microscopic observations, although it was during his residency that the first microscope appeared at Harvard. It came as a gift, in 1732, from another Thomas Hollis of London. The instrument was of the compound type, known as the Wilson screw-barrel. It was brought to America in a ship captained by John Homans, great-grandfather of the present Dr. John Homans. Winthrop succeeded Greenwood to the Hollis chair in 1739. This later John Winthrop, scion of the first governor's family, was of the Harvard class of 1732. He won his F.R.S. by astronomical observations, and was a scientist of distinction; but it is not recorded that he took special interest in the Wilson screw-barrel or any other microscope. In 1675, Edward Bromfield, an English merchant, had come to Boston; and his grandson, Edward Bromfield, Jr., A.B. (Harv.) 1742, was always busy with mechanical devices. He made for himself kaleidoscopes, and built a large and harmonious pipe-organ. He obtained a copy of Hooke's *Micrographia*, and in his colonial portrait, Newton's *Optics* stands beside

the Bible. As a crowning achievement in his short life (January 30, 1723/4-August 18, 1746) he made fine microscopes, and was a keen observer, yet had little patience with the recording or publication of his observations. It is only through the Rev. Thomas Prince, then pastor of the Old South Church, that we know anything of Bromfield's brilliant work. For Prince he projected the microscopic structure of a louse on a screen, and Prince observed intestinal peristalsis and defecation. They measured the size of a louse. Bromfield projected a drop of gutter water containing animalculi and Prince found that 3,110,400 of them were less in volume than a single cheese mite. Of all of Bromfield's remarkable work only a few remnants have been preserved. Dr. Lewis showed the only known drawing—grouped symbols of the "*Vita brevis*"—a gathered rose, a watch, and human skull. He showed also Bromfield's autographed copy of Hooke's *Micrographia*, the Smibert portrait of young Bromfield pointing proudly to his microscope, and the "Memoirs of Thomas Hollis," lately presented to the Medical School by Dr. F. John Poynton of London—these and Dr. Poynton's more recent original work in pioneer microscopy of disease.

WILLIAM HARVEY SOCIETY

The William Harvey Society of the Tufts College Medical School held its monthly meeting in the amphitheatre of the Beth Israel Hospital on Friday evening, January 12. Because of the unavoidable absence of Dr. William Allen Pusey, the scheduled speaker of the evening, the program was turned over to members of the Dermatological Department of the Tufts faculty. Some of the interesting features concerning syphilis were discussed.

The first speaker was Dr. Bernard Appel who addressed the meeting on the history of the disease. The well-known origin of the word, from the name of the shepherd in Fracastoro's poem, was mentioned and then this name traced farther back to the poems of Ovid. The most interesting controversy in regard to the disease has of course been the question as to whether it was pre- or post-Columbian in origin. Three methods of investigation have been available, the study of human remains, the study of pictures, and the study of the writings of the past. The "Pre-Columbians" hold that ancient Chinese writings of as far back as 2600 B.C. describe in very accurate detail what seems to be clinical syphilis. Syphilis is also described in Japanese literature of about 800 A.D. and there are allusions in the Holy Bible to a disease which may readily be interpreted as being syphilis. On the other hand, there is considerable evidence in the writings following Columbus' time that the latter's sailors brought the disease back to Europe from America, and that it was thence carried into Italy by the Spanish soldiers employed by Charles the Eighth.

The next speaker was Dr. Francis P. McCarthy who mentioned some of the important pathological aspects of syphilis. The pathological picture in primary, secondary, and tertiary syphilis was reviewed. Dr. John G. Downing then reviewed the course of the early stages of the disease and emphasized the importance of diagnosis in the rare extragenital lesions. Syphilis should always be ruled out in the presence of any persistent, slowly healing sore, no matter what its location.

Dr. Walter T. Garfield was the fourth speaker, and he discussed prophylaxis in its two phases, public and personal. In regard to the former, legislation and education are the factors in the attack. Proper hospitalization of patients during the infectious time, reporting of infectious cases, and rigid control and inspection of houses of prostitution are advisable. Compulsory blood Wassermann tests on persons to be married and pregnant women are also to be desired.

Dr. William P. Boardman concluded the evening's discussion by treating the very difficult subject of prognosis in syphilis. Early, intensive treatment and a careful follow-up is the "sine qua non" of any efforts at cure. At the same time the treatment, especially with the arsenicals, must not be overdone. Iodine, bismuth, and mercury are important adjuncts in a good course of treatment. Cardiac syphilis and neurosyphilis carry a poor prognosis, but clinical cure with good treatment can be held out as a possibility to all patients having early syphilis.

HAMPDEN DISTRICT MEDICAL SOCIETY

A regular meeting of the Hampden District of the Massachusetts Medical Society was held on January 30, 1934, at 4:30 P.M., in the rooms of the Springfield Academy of Medicine.

Two papers were presented after a short business meeting; the first an excellent treatise on the Aschheim-Zondek test for pregnancy, was by Dr. George Schadt. Pathological specimens of laboratory animals were presented to show the ease with which the test is made.

Dr. Soma Weiss, of Boston, reviewed the experimental studies made of the relation of the circulatory system and the vasomotor, especially in the syncope of the carotid sinus and the intercarotid nerve. Electrocardiographic tracings, added to other diagrams, showing what part the cardiovascular system plays in syncope, heightened the interest in an already absorbing paper.

Supper was served after the meeting adjourned.

JEROME A. WHITNEY, *Asst. Secretary.*

CHILDREN'S HOSPITAL MEETING

The thirty-third annual banquet and business meeting of the Children's Hospital was held at the Harvard Club on January 11, with the president, Dr. R. M. Smith, presiding. About 65 members attended. The occasion was used to formally recognize the appointment of Mr. George V. L. Meyer as director of the hospital. Appropriate greetings were sent to Miss I. C. Smith who has resigned after forty years of devoted service, including fourteen years as superintendent.

Dr. W. E. Ladd, speaking for the staff, reviewed the work of the hospital during the preceding year. Particularly interesting were his statements on the decline of the mortality rate of the surgical division. He reported the successful operation of 125 consecutive cases of congenital pyloric stenosis with no deaths, and the reduction in the death rate of intussusception from 50 per cent to the present rate of four per cent. Mr. George P. Gardner and Mr. Gordon Abbott, Jr., addressed the meeting briefly in behalf of the Board of Managers, and Mr. George V. L. Meyer was enthusiastically received after his statement of hospital policies under his direction.

The meeting was closed with an address by Dr. George H. Bigelow. Although speaking in a half humorous vein one must recognize the keenness of his vision respecting problems confronting medicine and hospital management in this era of changing social and economic control. The problem of the growing place of research was met by a plea for better integration of knowledge already acquired. He stressed the need of an objective estimate of the value of public health activities. The seemingly paradoxical situation of the medical profession striving for longer span of life while unemployment at the age of 40 steadily increases, seemed worthy of further thought.

The officers of the association elected for the coming year are as follows:

Dr. James L. Gamble, president; Dr. Lewis W. Hill, vice-president; Dr. B. E. Wood, treasurer; Dr. Henry Hudson, Jr., secretary.

THIRTIETH ANNUAL CONGRESS ON MEDICAL EDUCATION, LICENSURE AND HOSPITALS

The Thirtieth Annual Congress on Medical Education, Licensure and Hospitals was held at the Palmer House, Chicago, on February 12 and 13, 1934, and was fairly well attended. The quality of the papers presented, always somewhat uneven, was of a high average.

The keynote of intelligently facing the future was set in the opening address by the Chairman of the Council, Dr. Ray Lyman Wilbur. He not only reviewed the accomplishments of the Council, summarized as having almost eliminated the commercial medical school, but indicated also the lines along which he thought the next stage of progress would be developed. There is a changing point of view and social awareness is needed in medicine. The part the state is to play is not yet clear, but medicine must continue to adapt itself more fully to the present state of civilization and emphasize prevention as a major part in any intelligent program.

The relations of medical education to society as a whole were discussed by President Sproul of the University of California, chiefly from the point of view of the application of certain fairly clear sociological principles to the smaller field of medical education. He too emphasized the need of understanding by the physician of the society in which he lives. Also, although the focus of attention of the physician is the individual, if he sees the individual as isolated he is likely to miss the point and fail in his attempt to deal with concrete situations with which he is confronted. There is needed some intelligent adjustment between supply and demand, which terms must not be restricted to quantity alone. Medical service must be adjusted to the needs of the public and the first duty of a university is to maintain a high quality in its product. It is to be kept in mind that every form of prohibition promotes its own kind of bootlegging, and especially is commercialism a danger. President Sproul also emphasized the need in medicine of giving the student a clearer and deeper impression of health as a background for his consideration of disease.

The "general practitioner" whose demise was so confidently predicted by certain prophets a few years ago, received due attention from Dr. Dean Lewis, President of the American Medical Association. It is generally accepted that in no field of activity, medicine or art, or anything else, can a restoration of the old be effected. We may call it a restoration, but it is always something new. There is a growing realization that a family medical adviser, by whatever name he may be called, is an indispensable element in our society, and to the proper equipment of such physicians the schools are directing their attention and will continue to do so, in an increasing measure.

It is difficult to get agreement in formulation of what medical education should do for the student. He cannot be trained in every field, but his point of view should be so modified by his course that he will have the instinctive reactions of an educated physician. Interesting developments of this theme were presented in connection with the fields of psychiatry, preventive medicine, industrial hygiene and public health. Every physician should have not merely a recollection of the existence of these branches of medical knowledge, but an acute awareness of them as perhaps dominantly pertinent in his daily work.

The problems of medical licensure received considerable attention. The introductory address was by Justin Miller, Dean of the School of Law of Duke University, on the Philosophy of Professional Licensure, a scholarly and penetrating analysis. He compared and contrasted law and medicine, referring also to the military, religious and business professions. The awareness of social obligation was again emphasized, which is not incompatible with clear recognition of certain rights of self-determination on the part of the civilian professions. The license is not a reward for effort or sign of achievement, implying a static condition, but involves permission to act and an implication of going ahead. The determination of the moral qualifications of the candidate, so difficult for a board to evaluate, is after all of primary importance. Character defects must therefore be sought in school.

While there is a growing tendency among State Boards to recognize reciprocal evaluation of candidates by other boards, the term reciprocity is

falling into disuse because it does not describe the proper relation which should exist. It has often the implication of exchange of favors or possibility of retaliation, if favors are not exchanged. Registration by endorsement of credentials which usually means the acceptance of the examination of some other state as the equivalent of one's own, is gaining in favor.

There was a brief discussion of medical education in South America, pertinent because of the unconfirmed report that large numbers of unqualified candidates from the United States have gone or plan to go to medical schools in Latin America. The restrictions placed by State Boards in this country on graduates from many European medical schools have produced this new exodus. The most interesting point brought out was the difficulty hitherto experienced in getting any definite information about these schools, and on this account it was suggested that until specific information as to these institutions is forthcoming, graduates be denied registration in the United States. While some of the national universities seem to be of good grade, many of the schools are reported to be of very poor quality.

A topic of perennial interest, Traffic in Narcotics by Licensed Physicians, was discussed by H. J. Anslinger, United States Commissioner of Narcotics. While punishment may be inflicted by the Court for violation of the Harrison Narcotic Act, the Department of Narcotics cannot withhold a permit from a duly registered physician who makes application and pays the tax. The coöperation of the State Boards may be, therefore, of considerable assistance in dealing with this problem, the magnitude of which is not generally realized. Approximately ten per cent of the narcotics available for medicinal purposes are diverted to illegal use by physicians.

NEW ENGLAND HEART ASSOCIATION

The monthly meeting of the New England Heart Association was held in the amphitheatre of the Beth Israel Hospital on Monday evening, January 29. The program was devoted to reports of some of the work done at the Beth Israel Hospital under the direction of Dr. H. L. Blumgart, on thyroidectomy in heart disease.

The first speaker was Dr. M. J. Schlesinger who described the histology of the thyroid glands that have been removed in the treatment of heart disease. This study has been of value because of the opportunity to study a group of fresh, supposedly normal thyroid glands. Of the first fifty, forty-four were considered as within the limits of normal from patients adequately studied for thyroid dysfunction, and the other six had diagnoses of slight hyperplasia, diffuse chronic thyroiditis, multiple colloid nodules with fibrosis, multiple colloid nodules with cystic degeneration, colloid and fetal adenoma nodules, and single small fetal adenoma, each one. Dr. Schlesinger went on to describe his method (based on measurements of camera lucida drawings) for obtaining the dimensions of the cells of the gland as well as the gross composition of the organ. Slightly hyperplastic glands have about twice as much stroma and cells, and half as much colloid, as normal glands with either small or large acini. The exact dimensions of all parts of the glands can be measured and thus a definite characterization of glands will be obtained by this method.

Dr. David Davis discussed the heart in artificial myxedema. As the basal metabolic rate dropped, there occurred certain changes in electrocardiogram and an increase in heart size as revealed by the seven foot roentgenogram. Some of the patients with congestive failure showed no change in heart size, or actually showed a decrease, and this was explained by the shrinkage in heart size that accompanies circulatory improvement after acute dilatation. The increase in cardiac size occurred simultaneously and paralleled other evidences of developing myxedema such as increasing blood cholesterol. It generally became maximum when the hypothyroid state had become maximum and thereafter showed no further change. As the hypothyroid state developed, the basal metabolism dropped to an average of minus 30 and only after falling below this point, was there a rather sudden development of untoward symptoms such as fatigue, slight drowsiness, irritability and myxedematous swelling of the face and hands. Small doses of thyroid quickly relieved these symptoms and with the slight increase in metabolism there was a corresponding change in heart size and rapidity. In summing up his beliefs, Dr. Davis expressed the opinion that the heart changes in myxedema were merely expressions of myxedema and that they probably represented an adjustment to the changed hemo-dynamics occurring in the hypothyroid state.

Dr. J. E. F. Riseman, the third speaker, discussed a quantitative method of studying angina pectoris. He described and illustrated a simple little two step apparatus for exercising the patients. They were asked to walk up and down the steps, while the number of trips were counted and the factors other than exertion in causing attacks were studied. It has been found that, in some persons, attacks are brought on more readily at temperatures ranging about 50°F. Attacks of angina pectoris frequently came in a shorter number of trips after the patient had eaten a good-sized meal. Furthermore, in some cases, one attack seemed to protect against subsequent ones. With about one-fourth of the patients, the first test had to be discarded because of the excitement in the patient induced by a new procedure. Subsequent tests usually agreed accurately with each other, but not with the first one. In studying the production of a typical attack of angina, then, the factors seem to be the type of exercise, the temperature, the relation to meals, the relation to medication, excitement, and the time of the previous attack. The rate of exercising on the steps remained about the same in each individual. Fifty-three patients, with a questionable diagnosis of angina pectoris, were tested. Positive results (definite attacks) were obtained in 34 of these cases. Twenty-six were retested on the stair apparatus, and the results in twenty of these agreed

to within six trips. Negative results were obtained in nineteen (no attack produced); of these, two patients definitely had angina pectoris, four were proved not to have it, and thirteen remained questionable. The value of this work lies in its aid to diagnosis, its aid in the study of the results of therapy (aminophyllin and sodium nitrite were shown to give some protection against attacks, while total ablation of the thyroid gland gave marked protection), and in the comparison of patients with one another.

Dr. Weinstein of the hospital staff next presented eight patients, at varying times since operation, who had had striking relief from anginal pain or attacks of congestive failure.

Following this presentation, Mrs. Gilligan, of the research laboratory, reported on tetany as a postoperative complication following total thyroidectomy. In sixty cases operated upon, signs and symptoms of mild tetany appeared in eleven patients, or eighteen per cent, though the incidence has dropped to eight per cent in the last twenty-four cases. The time of onset of the signs was on the second postoperative day in six cases, and from the third to the fifth day in the other five cases. In ten patients signs and symptoms completely disappeared within two weeks, and in one patient the course was more prolonged. No convulsions occurred in any instance, and the condition was adequately controlled by calcium medication. The serum calcium values, although generally below normal, were reduced to 7 mg. per cent or less in only three patients and were above 8 mg. per cent in four cases; the serum phosphorus was above normal in only two instances.

Dr. David Berlin, the next speaker, discussed some of the surgical problems encountered in the operative procedure of total thyroidectomy. Local anesthesia is the anesthetic of choice in the poorest risks and especially in patients with marked hypertension. Gas-oxygen, after preliminary sedatives, has often been used. Severe tetany has not occurred, and while there have been some patients with slight numbness and tingling, no tetanic convulsions have occurred. The pyramidal lobe of the thyroid itself must be removed if present in order to insure total extirpation of the gland. Slides were shown depicting the relations of the very important recurrent laryngeal nerves to the thyroid and neighboring structures.

The final part of the program was devoted to a summary of the work on thyroidectomy in heart disease by Dr. Blumgart. In the fifty-five patients treated, in general the results have been good. There is still a question, of course, as to whether life is actually prolonged, but the operation is certainly justified by the comfort and period of useful activity obtained. Of the six patients who died at operation, all were persons with advanced congestive failure. Contraindications to the operation seem to be the presence of infection, syphilis, myxedema, marked renal insufficiency, and recent coronary thrombosis. The ideal patient for treatment is one with marked congestive failure who, however, responds moderately, at least, to prolonged bed-rest and diuresis. Dr. Blumgart concluded by emphasizing again that in none of the patients operated upon has there been serious recurrent nerve injury or tetany.

HOUSE OFFICERS' ASSOCIATION

Boston City Hospital

CHANGE OF DATE

The next meeting of the House Officers' Association of the Boston City Hospital will be held in the Thorndike Amphitheatre on March 5, instead of March 12, at 8 P.M.

Speakers: Drs. A. Warren Stearns and Abraham Myerson.

Subject: Forensic Psychiatry.

Robert T. Phillips, M.D., *Secretary.*

HARVARD MEDICAL SOCIETY

The next meeting of the Harvard Medical Society will be held in the Peter Bent Brigham Hospital Amphitheatre (Van Dyke Street entrance), Tuesday evening, March 13, at 8:15 o'clock.

Clinical and Experimental Observations on the Effect of Total Thyroidectomy

1. Samuel A. Levine. "The Rationale for Total Thyroidectomy in the Treatment of Intractable Heart Disease."
2. Eugene C. Eppinger. "The Effect of Total Thyroidectomy on the Response to Adrenalin in Man."
3. Philip Shambaugh. "Observations on 'Experimental Angina Pectoris' in Animals."
4. Morton G. Brown and Margaret Sawyer. "The Action of Secreted and Injected Adrenalin Before and After Total Thyroidectomy."
5. Max T. Schnitker. "Skin Temperature Reactions Before and After Total Thyroidectomy."
6. Elliott C. Cutler. "Clinical Results Following Total Thyroidectomy."

John Homans, M.D., *Secretary.*

GREATER BOSTON MEDICAL SOCIETY

There will be a joint meeting of the Greater Boston Medical Society and the staff of the Beth Israel Hospital on Tuesday, March 6, 1934, at 8:15 P.M., at the Beth Israel Hospital, Boston, Mass.

Speaker: Professor Leopold Lichtwitz, M.D., Physician-in-Chief, Montefiore Hospital for Chronic Diseases, New York.

Subject: Dynamics of Blood Dyscrasias.

Discussion: Maurice B. Strauss, M.D., William E. Dameshek, M.D.

M. E. Barron, M.D., *President.*
D. B. Stearns, M.D., *Secretary.*

WILLIAM HARVEY SOCIETY

The next meeting of the William Harvey Society will be held Friday, March 9, in the Auditorium of the Beth Israel Hospital, Boston, at 8 P.M.

PROGRAM

Speaker: Dr. Irving J. Walker, Clinical Professor of Surgery, Harvard Medical School.

Subject: "Judgment and Conscience in Surgery."

Chairman: Dr. Horace Binney, Professor of Surgery, Tufts College Medical School.

THE BOSTON DISPENSARY

CLINICAL STAFF MEETING

A meeting of the clinical staff of the Boston Dispensary will be held on Wednesday evening, March 7, in the auditorium on the second floor of the Dispensary building, at 8 P.M.

PROGRAM

The Treatment of Chronic Heart Disease by Complete Thyroidectomy

1. Results in Patients with Angina Pectoris. By J. E. F. Riseman, M.D.
2. Results in Patients with Congestive Failure. By D. Davis, M.D.
3. Surgical Considerations. By D. Berlin, M.D.
4. Indications and Contraindications. By H. L. Blumgart, M.D.

Invitation is extended to any who are interested in the subject.

LOUIS E. PHANEUF, M.D., *President.*
LOUIS E. WOLFSON, M.D., *Secretary.*

SOCIETY MEETINGS, CONGRESSES AND CONFERENCES

March 1—Faulkner Hospital Clinical Meeting at 5 P.M.

March 5—House Officers' Association, Boston City Hospital. See page 505.

March 5, 6 and 7—The Southeastern Surgical Congress will be held at Nashville, Tenn. For information write Dr. B. T. Beasley, 1019 Doctors Building, Atlanta.

March 6—Greater Boston Medical Society. See page 505.

March 7—Boston Dispensary. Clinical Staff Meeting. See notice above.

March 9—William Harvey Society. See page 505.

March 13—Harvard Medical Society. See page 505.

March 23—New England Pediatric Society will meet in Boston. For information address Dr. Gerald Hoeffel, Secretary, 319 Longwood Avenue, Boston.

April 13, 20 and 27—Salmon Memorial Lectures. See page 443, issue of February 22.

April 16—Boston University School of Medicine to Conduct a Clinical Meeting at Boston City Hospital.

April 16-20—The American College of Physicians will hold its Eighteenth Annual Clinical Session in Chicago at the Palmer House. For information write Mr. E. R. Loveland, Executive Secretary, 133-135 South 36th Street, Philadelphia, Pa.

April 30—The American Board of Dermatology and Syphilology. Examinations for Certificates. Address: Dr. C. Guy Lane, 416 Marlboro Street, Boston, for details.

July 24-31—The IVth International Congress of Radiology will be held in Zurich under the presidency of Professor H. R. Schnitz. General Secretary Dr. H. E. Walther, Gloriastrasse 14, Zurich.

September 3-6—American Public Health Association, at Pasadena, California. Dr. J. D. Dunshee, Chairman, Local Committee on Arrangements.

September 4, 5, 6—International Union Against Tuberculosis will be held in Warsaw. For particulars address The National Tuberculosis Association, 450 Seventh Avenue, New York, N. Y.

DISTRICT MEDICAL SOCIETIES

ESSEX SOUTH DISTRICT MEDICAL SOCIETY

Wednesday, March 7—Lynn Hospital. Clinic 5 P.M. Dinner 7 P.M. Speaker: Dr. Frank H. Lahey, Boston. Subject to be announced. Film Electrocardiogram.

Wednesday, April 4—Essex Sanatorium, Middleton. Clinic 5 P.M. Dinner 7 P.M. Speakers: Dr. Elliott P. Joslin and Dr. Howard F. Root, Boston. Subject: "Tuberculosis Complicating Diabetes."

Thursday, May 3—Censors' Meeting, at Salem Hospital, 3:30 P.M.

Tuesday, May 8—Annual Meeting. Salem Country Club, Forrest Street, Peabody. Dinner at 7. Speaker to be announced. Subject to be announced.

RALPH E. STONE, M.D., Secretary.
221 Cabot Street, Beverly, Mass.

FRANKLIN DISTRICT MEDICAL SOCIETY

Meetings will be held on the second Tuesday of March and May at the Weldon Hotel, Greenfield, at 11 A.M.

CHARLES MOLINE, M.D., Secretary.
Sunderland, Mass.

MIDDLESEX EAST DISTRICT MEDICAL SOCIETY

Meetings will take place in March (2nd Wednesday) at Wakefield, and May (2nd Wednesday) at Winchester.

ALLAN R. CUNNINGHAM, M.D., Secretary.
76 Church Street, Winchester, Mass.

MIDDLESEX NORTH DISTRICT MEDICAL SOCIETY

Meeting will be held on April 25.

T. A. STAMAS, M.D., Secretary.
226 Central Street, Lowell, Mass.

NORFOLK DISTRICT MEDICAL SOCIETY

March 27—Faulkner Hospital, 8:30 P.M. Dr. Henry H. Faxon and Dr. Edward A. Edwards: Symposium on "Varicose Veins." Discussion by Dr. E. E. O'Neil.

April 17—Hotel Kenmore, 8:30 P.M. Special Business Meeting.

May—Annual Meeting. Time, place and program to be announced.

FRANK S. CRUICKSHANK, M.D., Secretary.
1695 Beacon Street, Brookline, Mass.

NORFOLK SOUTH DISTRICT MEDICAL SOCIETY

March 1—12 noon at Quincy City Hospital. Program by the hospital staff.

April 5—12 noon at Norfolk County Hospital. Speaker: Dr. Elliott P. Joslin. Subject: Diabetes.

May 3—12 noon at Norfolk County Hospital. Annual Meeting. Election of Officers.

N. R. PILLSBURY, M.D., Secretary.
Norfolk County Hospital, South Braintree, Mass.

SUFFOLK DISTRICT MEDICAL SOCIETY

March 28—Clinical Meeting at the Massachusetts Memorial Hospitals.

April 25—Annual Meeting at the Boston Medical Library. Election of Officers. Scientific Program, titles and speakers to be announced.

The Medical Profession is cordially invited to attend all of these meetings.

JAMES H. MEANS, M.D., Vice-President.
GEORGE P. REYNOLDS, M.D., Secretary,
311 Beacon Street, Boston, Mass.

WORCESTER DISTRICT MEDICAL SOCIETY

All meetings to be held on Wednesdays as follows:

March 14—Dinner and scientific program at the Memorial Hospital, Worcester, Mass.

April 11—Open date.

May 9—Annual Meeting. Time and place to be announced later.

ERWIN C. MILLER, M.D., Secretary.
27 Elm Street, Worcester, Mass.

BOOK REVIEW

REPUDIATION OF STATEMENT

The publishers of the book "The Pregnant Woman" by Porter Brown, which book was reviewed in our issue of February 15, page 402, have repudiated the statement which was made to the effect that "All who purchase the 'Pregnant Woman' will be privileged to obtain personal advice on pregnancy from the author."